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ABSTRACT

The second volume in this series on Serbo-Croatian-English contrastive analysis contains five articles. They are: "On Contrastive Contrastive Grammar," by Eric P. Hamp; "Remarks on Contrastive Analysis and Translation," by Vladimir Ivir; "Formal and Semantic Considerations in Contrastive Analysis," by Jerry L. Liston; "On Differences in Pronominalization in English and Serbo-Croat," by Ljiljana Mihailovic; and "Serbo-Croatian Nominal Inflection," by Charles E. Bidwell. (CLK)

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THE YUGOSLAV SERBO-CROATIAN-ENGLISH CONTRASTIVE PROJECT

B. STUDIES

2

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ZAGREB 1970

INSTITUTE OF LINGUISTICS
Faculty of Philosophy, University of Zagreb
Zagreb, Yugoslavia

CENTER FOR APPLIED LINGUISTICS
Washington, D. C., USA

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B. STUDIES

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Edited by

Rudolf Filipović

Zagreb 1970

INSTITUTE OF LINGUISTICS
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The Yugoslav Serbo-Croatian - English Contrastive Project is an international venture involving the cooperation of Yugoslav and American scholars. Its primary aim is to facilitate the teaching of English as the second language to speakers of Serbo-Croatian. The results should also have relevance for the teaching of Serbo-Croatian to English speakers. It is further hoped that these results will afford new insight into the linguistic structures of the two languages and will constitute a contribution to contrastive linguistics.

The Project is directed by Rudolf Filipović, Professor of English and Director of the Institute of Linguistics of the Faculty of Philosophy, University of Zagreb, Yugoslavia, and coordinated by the Center for Applied Linguistics, Washington, D.C., U.S.A., represented by William Nemser, Director of the Center's Foreign Language Program.

The Project is supported jointly by the governments of Yugoslavia and the United States, and by the Ford Foundation.

The results of the Project research are presented in three series:
A. Reports; B. Studies; C. Pedagogical Materials.

Eric P. Hamp (University of Chicago)

ON CONTRASTIVE CONTRASTIVE GRAMMAR

Any project for contrastive grammar involving [illegible] English should be, so to speak, open-ended, that is to say, [illegible] there should be observers from at least the Slovene and Macedonian areas, but I think that this should be considered in an even wider context than merely in terms of some envisaged future practicality affecting [illegible] grammar writing within the Slavic areas of Yugoslavia. Obviously the Albanian area of Yugoslavia would have relevance at some time, but my thought goes considerably farther than this. There are [illegible] at least of interest, if not shared, affecting surrounding languages, particularly Romanian and Magyar on the one hand, and [illegible] on the other. And in these cases there is added interest [illegible] with languages that have no close immediate genetic relation.

Any contrastive grammar project is admittedly aimed at various phases of practicality. One of them must be, of course, the [illegible] of teaching English to speakers of Serbo-Croatian, and of teaching Serbo-Croatian to speakers of English, etc. etc. for each pair of languages involved in any such enterprise.

That is not to minimize at all the importance of these practical questions, and I think we should always keep them well in front of us. With such ends in view we are forced to stick close to the data, to keep our eyes closely focused on actual occurring material, and not to stray off into excessively theoretical matters, however attractive these questions might be and however valuable the insights gained from them might ultimately be.

On the other hand, while keeping these practical and homely questions firmly in mind, I want to focus attention also on what seems to me to be a prospect that is at least equally interesting and ultimately productive. I refer by this to the more academic questions of grammar writing, and to the comparison of features in language situations of at least two sorts; for in such a project as this we would have two very different types of data represented. One sort of problem is the contrastive problem offered by English and Serbo-Croatian, or separately by English and any other language of this area. In such a case, one is contrasting two languages that do not by any means come from opposite ends of the earth; nevertheless, two such languages are widely separated in genetic time, are considerably separated in geographical space, and are very interestingly separated in total cultural remove in the anthropological or sociological sense.

Again, when one thinks of Serbo-Croatian and Romanian or Magyar or Albanian or Greek, one is thinking then of languages of fairly close geographic proximity, of languages, in many senses, of extremely close cultural proximity, but of structures of some considerable presumed distance. Therefore, an experiment controlled in this fashion leaves as a variable to be investigated the degree of linguistic remove that is actually to be found. In other words, we can think not only of the problem of stating just how distant English and Serbo-Croatian are in so many ways, but conversely we may ask just how near to identical Greek and Serbo-Croatian, for example, are. This is to put the question in the simplest and boldest possible terms.

In this sense it seems to me that in the long run the project envisaged could furnish material and insights of a much more far-reaching sort than merely that of solving an immediate problem of placing the

grammars of two languages face to face and inspecting their differences.

Now, when it comes to the question of contrastive grammar as such, I am not entirely sure that I really understand what contrastive grammar is supposed to be. It seems to me that in many ways this remains yet to be defined, or rather explicated.[2] Obviously, it has to do with finding out the differences between the grammars of two languages. If we want to see what the differences are between two languages we could start out in one of two either laborious or wrong-headed ways. We could simply place two texts side by side and somehow list all the differences. Such a method would obviously have all the faults and more of all the worst grammatical theories that have been criticised up to date. We could alternatively try to put two speakers together and prod them to speak, so that they kept making an infinite series of utterances for us and we could try to count and catalogue the differences as they came along. This would involve only certain slight differences from the first method.

On the other hand, it is clear that in some sense the question of contrastive grammar is in fact a matter of juxtaposing two bodies of information and somehow listing the differences. Whether and in what way one can do more than just list, so far as I understand the matter, remains to be explored. That is to say, can one evolve a set of expressions which themselves are not in some way the result of some simple subtraction of the two original sets of expressions that characterize the two original grammars.

Now, if, for the time being, we envisage the problem as a question of comparing two sets of expressions, two grammars, and listing the differences, it is clear again that there are great differences to be found

in the result depending on the choice of grammatical theories that one starts from.

As I understand it, it has already been decided that this project is to go forward on the basis of a generative transformational approach to grammar. I think myself that in our present state of knowledge this is an entirely good decision and the only sensible way to proceed. I thought I might take as the basing point of my little talk a couple of problems which illustrate the usefulness of basing oneself on this approach rather than on some other approach known to linguistic theory up to now.

By what I have somewhat playfully called "contrastive contrastive grammar", I mean, of course, the nature and kind of differences that would be found between contrastive statements involving a copule of different languages (in our case, of this Balkan area). E.g. a contrastive statement of English and Serbo-Croatian should turn up various facts, one of which is that in some situations one says "molim" where one does not say "please" in English, nor "I beg you", or the like. Again, a contrastive statement of English and Greek will show that in Greek one frequently says [parakálo] analogously in cases where in English one does not say "please", or the like.

In many respects both of these two observations in these two contrastive statements will be identical; that is to say, the occurrence or non-occurrence of "molim" and [parakálo] is noted contrastively in like situations, both semantic and syntactic, and it is also true that the list of entries to which these two observations apply are thoroughly parallel. I am sure I must be oversimplifying here since I have simply picked the examples at random, but they will serve our purpose.

The imagined list in each case is limited to this single item. Thus, for purposes of such a contrastive statement it is of no moment that the internal structure of word formation, or the phonological composition or some other such relation between the two words "molim" and [parakálo] are quite distinct, quite different and totally without connection. The two expressions are, in short, nearly as dissimilar one from the other as they each are separately from the English word "please". But the other facts of their behaviour in a contrastive picture are notably alike (including the fact that they are both first-person verbs, with some complement deleted).

Thus, we see a parallelism in two putative statements in such a detail as this. There are obviously many other details that could be similarly singled out without great effort at all. Small matters of vocabulary are always the easiest to think of in such cases. E.g. in many parts of the Balkans the liver and the lungs are classed under a single lexeme, something reflecting Turkish [ciğer], and then they are differentiated by modifying them as "white" and "black".

But we are interested in exploring, too, some deeper matters than these rather superficial, or rather detailed and fine-grained similarities or differences between putative contrastive statements. Let us first take a problem of phonology.

We know that in both Greek and Serbo-Croatian we encounter notably — in a fashion not similarly and typically encountered in all kinds of English — two sets of sounds. We find, on the one hand, an "l" sound and an "n" sound much like those sounds found in some positions in some kinds of English words, no matter whether British or American English. On the other hand, we encounter palatal [l] and [n] sounds which are perhaps in some ways

less familiar to speakers of many kinds of English.

In Greek we have, for instance, such a sentence as [ta eljinjikà ðen ta ksérο polji kalà] (as pronounced by many Greeks) "Greek, I don't know it very well, I don't speak Greek very well". We have pairs of words in Greek which are reminiscent to a speaker of Serbo-Croatian of things found in his own language. For instance, we have such a word as the word "to melt" ['ljono], which starts out a bit the way the Serbo-Croatian word [ljut] or [ljudi] starts out. We have similarly words such as the verb "to feel" ['njoθo] with a [nj] much like that which starts out the Serbo-Croatian [njegov] or [njiva].

One can make a simple rule and say that leaving aside the details of the analysis of such forms as ['ljono] or ['njoθo], all Greek "l"-s and "n"-s are treated in a predictable way depending on what follows them. Indeed, not all Greek speakers render these things the same way. The way I pronounce them above is a way that is quite current in the Peloponnesos, but it is by no means used by all speakers of other geographic or social provenience.

Now, if we base ourselves upon a conventional taxonomic phonemic grammar, whether or not it is bi-uniquely based (that is, with the restriction of bi-uniqueness) or whether it is according to some other model, we will list an inventory of sounds, including different kinds of "l"-s and "n"-s. We can also list distributions. In this way we will have different kinds of statements occurring in different places in the grammar which are in many ways difficult to compare. This will be particularly true when we place side by side the contrastive statement evolved from such a display for English and Greek and one for English and Serbo-Croatian. In short, both Serbo-Croatian and Greek will be found in this respect to have the same inventory of items. They will, however, show different distributions registered. Of course the distribution of consonants in Greek and Serbo-Croatian is markedly

dissimilar in a great many ways. Think only of the very striking limitations on consonantism in the final position of words in these two languages, and yet the utterly different nature of the restrictions. In Greek one is restricted to just three consonants which may occur finally, leaving aside very recent unassimilated loans, such as "golf". In Serbo-Croatian the limitation is not so much the number of final consonants as the arrangements of them and the resolution of potential final clusters. Thus statements about the limitations in distribution of these liquids and nasals would be partly lost amongst other statements of distribution, and these facts would furthermore come out in different places in the respective contrastive statements.

As we have noted above, in Greek some speakers will say [ta eljinjikă ðen_ta ksĕro poljĭ kală] with palatal [lj] and [nj] before all "l" sounds. Others will say [ta elinikă ðen_ta ksĕro polĭ kală] with [l] and [n] in such situations. And you will also hear Greek speakers who have [ta eljinikă ðen_ta ksĕro poljĭ kală] with [lj] palatal, but [n] not palatal. These would make the distributional statements of a conventional phonemic grammar even more complicated. A Firthian prosodic treatment would turn out to be equally dispersed in its treatment of these particulars.

On the other hand in Serbo-Croatian we may profitably consider such examples as [Oni su mi dali nekoliko od najboljih knjiga koje su imali]. We leave aside the question of just how in detail we will treat the palatal [lj], [nj] segments and how we may possibly derive them from sequences of [l] and [n] plus [j]. Leaving that aside, there is no doubt that there is otherwise a relative independence in the phonetic occurrence of such segments as these as compared with the Greek situation; phonetically they are not nearly so superficially predictable in Serbo-Croatian as in Greek.

Now, in a generative grammar we may consider that the palatality or non-palatality

of the laterals and nasals in Serbo-Croatian will depend only on the details of formulating the incidence of "iotized" or "yodized" sequences of segments, but otherwise on no generally applicable rules inducing the phonetics of these sets of sounds. On the other hand, we may consider that for the Greek situation these palatalizations, or (in the case of some speakers) failure to palatalize, relate only to the presence or absence, respectively, of a late phonetic rule in Greek. We see then that this whole phenomenon is localized to one place in the grammar and that, with respect to English, these two contrastive statements then contrast in turn by having and not having one particular kind of late phonetic rule. Moreover, this late phonetic rule that applies to the lateral and nasal in Greek is in some ways to be associated with the other late phonetic rule producing palatalization of the Greek velars. In other words, Greek has a small set of late phonetic rules which palatalize various segments in partly similar ways, both with respect to phonological context and dialect distribution.

In this fashion, by operating with ordered rules we associate everything not only that is mutually relevant within the language, but also that turns out to be contrastively interesting ; and this in a fashion whereby we can immediately seize the differences.

One may say then that the contrastive statements to be formulated with respect to English for Serbo-Croatian and Greek do not differ in the presence or absence of this or that sound, or of this or that distribution; they differ rather by the presence or absence of a late rule affecting compactly a set of sounds.

Now we might turn our attention to a grammatical problem, the question of imperatives and futures, which I propose to deal with very briefly in a discursive way. As Klima has elegantly shown, the imperative in Englis'

not only has a second person pronoun in the underlying structure, but also has the future auxiliary, as is shown by the so called tag questions, such as, "go out now, will you". Of course, in the negative we do not use the future auxiliary, but that fact simply requires separate subtreatment and does not vitiate the basic observation. That is to say, we say "don't go now", not *"won't go now".

When we turn our attention to futures and imperatives in Serbo-Croatian and in Greek, and in Albanian, for that matter, some interesting things immediately come into view. First of all, let us consider specifically the future.

The future in Serbo-Croatian, in Greek and in Albanian is formed quite differently from the English future, and each of the respective contrastive statements will take appropriate note of this fact. As we know, we have such forms as, [ja ću doći], [ja ću da dodjem], [doći ću], [da li ću doći], [da li da dodjem], or when it has to stand in first position, the fuller form of the auxiliary [hoću li doći]. The future, then, is formed in Serbo-Croatian with the infinitive or "da" form, depending on which variant of the language one is focusing on, and the appropriately conjugated form of [hteti].

Wayles Browne, in a recent paper of his that he was kind enough to show me, on the topic of enclitics, has made the very interesting observation that the auxiliary [ću] etc. is an undoubted verb base, just as is [žele], the base in [želim], and that the syntactic difference between [želim] and [ću] is simply that [želim] occurs with subordinate clauses with subjects different from that carried by [želim], whereas [ću] does not. In other words, we have one verb [želim] with free occurrence with subordinate clauses, and [ću] which has a constraint. That is to say, the latter requires either a concord or a deletion of subject, depending on which turns out to be the best analysis.

This means either a limitation on the difference in subjects in the two clauses, or the occurrence of the subject but once.

So much for the situation in Serbo-Croatian: for the future we have a conjugated auxiliary, plus the main verb in its appropriate form, and no difference of subject. In Greek and Albanian the superficial structure looks very different.

In Greek "I want to go" or "I want him to go" is formed with [ˈθelo] plus a verb which may, as in Serbo-Croatian, possibly have an independent subject: "I want to go" is [ˈθelo naˈpao]. "I will go" or "I shall go", that is, the equivalent of the Serbo-Croatian conjugated [ću] form, is in Greek [θaˈpao] with what looks superficially like a particle [θa] plus a conjugated main verb: "I will go", "you will go" is [θaˈpao], [θaˈpas], and so forth.

Albanian has exactly the same situation as Greek, although differently manifested in detail once again. "I want to go" is [duatëˈškonj] "I want that I go". "I will go" (ignoring the Northern, or Geg, variant of the language, which permits a quite different kind of future construction) has a normal Tosk form [dotëˈškonj], with an invariant [do], a fully conjugated main verb in the subordinate clause, and with [të] somewhat like "da". There are other dialects of Albanian that have the introductory particle with even smaller substance and superficially less connected with anything else. There are some dialect variants of Albanian that show for "I will go" [oˈškonj] with an apparent simple particle [o]. This last is simply a drastically reduced form of [do] with the equivalent of Serbo-Croatian "da" omitted. In other words [oˈškonj] in Albanian is much like [θaˈpao] in Greek. We also know etymologically that Greek [θa] is historically a collapse of a drastically reduced form [ˈθelo] plus [na], the latter being the particle matching Serbo-Croatian [da].

Now, in both these Greek and Albanian forms we may say very crudely that with respect to superficial shape in one case — the case where Serbo-Croatian uses [želim] and can have free variation of subjects in both clauses — the first form is fully conjugated, and independently of the second form. The superficial shape of the other case is that of an invariant particle followed by a fully conjugated main verb. This, then, is in superficial structure the very reverse of Serbo-Croatian, where [ću] is conjugated and the other part is invariant; that is to say, the second part is either in infinitive form, or when not in the infinitive it then behaves as any embedded sentence of a certain type does.

We see that the structures of "desire" in all three languages are exactly the same; the [želim] type simply has two clauses which are brought together and which each are free to have their own subject. On the other hand, in the case of the future we find the subject expressed but once for the whole construction. In Serbo-Croatian it shows up in the surface structure on the auxiliary element [ću]. In Greek and Albanian it appeares in the surface structure on the main verb, leaving the remainder to look superficially like a particle, which in underlying structure, however, it clearly is not.

We see that, contrary to our phonological example, the contrast between these two contrastive statements in this last case would be very small. It resembles the case of the use of words for "please". That is to say, it is only in some small rules that the contrastive statements differ, while the differences that strike one at first sight turn out to be very superficial. At bottom the constructions are highly similar. In other words, there would be found in the contrastive statements analogous rules in similar places (or order) for the deletion of one of the identical subject forms in such future constructions; or alternatively, there would be matching rules that place

correctly the single subject on the element in which in the respective surface structure it ultimately showed up.

As to the relation of future to imperative, it seems to me that here we would come across a very important difference from English in Serbo-Croatian, and one that there is really scarcely time to go into now. I will do no more than mention the matter here. In the Serbo-Croatian imperative it seems highly unlikely that there is an underlying future as there is in English, though what is underlying seems to be related to other possible verbal expressions. If we look at the negative imperative, [nemoj čekati], [nemoj da čekaš], we see something that, apart from etymology, may quite readily be linked with "može". For the imperative it seems likely that we have, underlying a form such as [čekaj], the verb [moći].

If you like, in the positive imperative "čekaj" the [i:] form will be a transformed shape of [mog]~[mož]. This seems to reply to other frequent uses of this verb that are striking to any foreigner, uses as an all-purpose auxiliary or as a verbal dummy in other expressions. For instance, if you say "hoću li doći" and I reply "hoćeš", that may be a trifle abrupt. One may equally reply "možeš" in a way that English would not naturally do. The reply to numbers of questions so as to carry the verb forward will very frequently be "može". In other words, the verb [mog]~[mož] seems to apply much more pervasively in the underlying structure of verbal constructions in Serbo-Croatian than the corresponding verbs of "can" of "ability" do either in English or in Greek or Albanian.

NOTES

1. Written for the first meeting of the Project (Zagreb, April 1967.)
2. See also E. P. Hamp, "What a contrastive grammar is not, if it is", in Linguistics and Language Study (Georgetown University 19th Annual Round Table, ed. James E. Alatis, 1968), pp. 137-147.

Vladimir Ivir (University of Zagreb)

REMARKS ON CONTRASTIVE ANALYSIS AND TRANSLATION

Contrastive analysis and translation are very intimately connected: some translation is involved in any kind of contrastive work, and in certain contrastive projects now under way[1] translation is intended to serve as the starting point of analysis. Moreover, it can be claimed that interference, the key concept in contrastive analysis, stems from translation too.

It may be useful, therefore, to examine in what ways the two terms are related, how they differ from each other, and to what extent a corpus-based translation method can be used in contrastive analysis.

Translation is generally understood to mean a procedure for conveying messages from one language to another:

> "This means that one may now define translating as 'reproducing in the receptor language the closest natural equivalent of the message of the source language, first in terms of meaning and second in terms of style'." (E. Nida, 1969:495)[2]

> "Most frequently, translation from one language into another substitutes messages in one language not for separate code-units but for entire messages in some other language." (R. Jakobson, 1959:235)[3]

> "... Man ... does not correlate the structures in two different codes. In practice a good "translator" first understands the heard (or read) message acting as a speaker of the input language, and then repeats the understood message now acting as a speaker of the output language." (N. D. Andreyev, 1964:625)[4]

> "... the input forces me to recreate in my mind the social context of the utterance and to search my

> memory for the closest equivalent in the output language. Instead of the single S - R box which receives the input and generates the output, I have to have two such boxes, one for each language. The channel between them is not a mechanism which matches words and structures, though it can also do this, but one which matches the message contents."
> (E. Haugen, 1964: 636)[5]

> "Translation may be viewed amorphously as the rendition of a text from one language to another. This is translation from the standpoint of la parole: the text, the act of speech or writing, is the thing. Or it may be viewed as a systematic comparison of two languages: this is translation from the standpoint of la langue."
> (D. Bolinger, 1966: 130)[6]

This last quotation is of particular interest for our purpose, since the distinction that Bolinger makes between the two kinds of translation (the latter he refers to as transformulation or structural translation) is the one that can, in my opinion, profitably be made between translation and contrastive analysis[7]. That the distinction is needed will be obvious to anyone who has ever done any serious translation work, as well as to anyone who has ever attempted to contrast linguistic structures in different languages on the basis of a translated corpus. The translator is aware of the fact that he "starts with a text in one language (the "source" language) and, having decided on its universal meaning, asks how a text of equivalent meaning can be synthesized in the target language"; the corpus-conscious contrastive analyst, on the other hand, "takes the translational pair as given ... [and] .. attempts to superimpose the structural description of the source language upon the target language text, in order to measure the

degree of fit and hence determine the prediction of potential positive or negative transfer." (C. James, 1969: 86-7)[8]

Assuming that the Serbo-Croatian-English contrastive project will be based on a translated corpus (R. Filipović, 1969: 38)[9], it now becomes necessary to examine the kind of material that actual translation is likely to produce and the usefulness of this material both from the point of view of the Project as a whole and from the point of view of an individual Project worker. It is found[10] that even the freest of translations will retain a certain degree of structural fit (i.e. correspondence) and will consequently be usable in corpus-based contrastive analysis. But it can also be shown that the areas of correspondence and its degree will depend on the choices the translator has made in re-coding the message of the original. Finally, some of the difficulties of locating the structural correspondences in the translated text have to be recognized. The danger here is of two kinds: one, that the analyst may establish correspondences that are false or spurious (see Ivir, 1969: 22-3), and the other that he may fail to perceive those that are actually present in the text. An instance of the latter danger is provided by the rendering of English articles in Serbo-Croatian. It is claimed sometimes that the article in English comes very close to furnishing an example of a structure in L_T that finds no systematic correspondence in L_S. However, a more careful examination of some of the translations may point to at least partial correspondences: thus Catford's (1965: 28)[11] example for Russian in which the word-order is seen as a structural counterpart of the English article is also valid for Serbo-Croatian:

A woman came out of the house.	Iz kuće je izašla žena.
The woman came out of the house	Žena je izašla iz kuće.

James (1969: 92) has another example for Russian, also applicable to Serbo-

Croatian, in which the presence or absence of the article in English is reflected in the aspect of the Russian verb:

He wrote the letters.	Napisao je pisma.
He wrote letters.	Pisao je pisma.

Such cases would obviously have to be covered by the contrastive statement. But how delicate this search for formal correspondents is in actual translated text can be appreciated if we change our examples just a little:

A woman came to ask if we needed a baby sitter.	Došla je neka žena i upitala da li trebamo nekoga za čuvanje djece Neka žena je došla i upitala...
The woman came who cleans our appartment every other day	Došla je žena koja nam sprema stan svaki drugi dan. * Žena je došla koja nam ...
All day long he did nothing but wrote the letters that she had asked him to write on her behalf.	Cijeli dan nije ništa drugo radio nego je pisao (*napisao) pisma za koja ga je ona molila da ih napiše u njeno ime.

The point to note is that variant recorded translations of a given structure will not be arbitrarily produced by the analyst but will rather be contained in the translated corpus with which he will be asked to deal; furthermore, that contrastive analysis, if it is to be of any significance, cannot be restricted to straight-forward correspondences of the type E passive - SC passive, E genitive - SC genitive, etc. A very important question is how long one can still claim that a correspondence of some kind exists. Are we justified in establishing the E passive verb - SC noun correspondende in the following pair of sentences:

There can be no doubt that the personality and the equilibrium of the indivi-	Nema nikakve sumnje da tehnička civilizacija znači (predstavlja) ozbiljnu

dual are gravely threatened	prijetnju za ličnost i
by technological civilization.	ravnotežu pojedinca.

I think that in this case, unlike the E passive - SC active relationship which is fairly systematic, the correspondence no longer exists. This can be shown by manipulating the translated sentence further:

... tehnička civilizacija prijeti ravnoteži --> tehnička civilizacija znači (predstavlja) prijetnju za ravnotežu

It is seen here that a transformation of the type "NP_{Nom} prijeti NP_{Dat}" --> "NP_{Nom} znači (predstavlja) prijetnju za NP_{Acc}" affects the basic form of the SC verb and precedes other transformations, such as the passive transformation.

A further question connected with this is that of the E adverb - SC adjective correspondence in the same pair of sentences. Can we use this translation if our topic happens to be the contrastive analysis of English adverbs and claim that a correspondence exists at this point with Serbo-Croatian adjectives? Again, the answer is no - not because the E adverb - SC adjective correspondence would be ruled out (cf. the room upstairs - gornja soba, the meeting yesterday - jučerašnji sastanak) but because it is here an automatic consequence of the change of the verb into a noun: threaten - prijetiti --> značiti prijetnju; gravely threaten - značiti ozbiljnu prijetnju. The "prijetiti --> značiti (predstavljati) prijetnju" transformation is more basic than the one that introduces modification. Once it is performed, the noun will naturally select an adjective; if it is not performed, the verb will choose an adverb. (Notice that although the E adverb - SC adjective correspondence cannot be set up here for the purpose of part-of-speech contrasting, the correspondence is perfectly valid for lexical statements about the meanings and collocations of "grav-" and "ozbilj-" and about the word-formation

relations between adjectives and adverbs in English and Serbo-Croatian. This is indicative of the kinds of decisions that the analyst will be called upon to make when handling the translated corpus.)

Translation equivalence serves merely to help us isolate items of structure with shared meanings in the two languages. And this is where the use of translation in contrastive analysis ends. After that point, the items of structure thus isolated are examined formally for their syntactico-semantic properties, which are then compared to note the similarities and differences in the two languages.

For instance, in dealing with the passive voice, the analyst will show how it relates to the active voice and to non-passive be + -ed constructions (both of the "bills are paid" and "I was impressed" type); he will examine the restrictions that affect the passivization transformation (e.g. the choice of verbs, contextual limitations); he will want to study the agential vs. non-agential passives, etc. Turning to Serbo-Croatian, he will first of all find that his corpus yields a certain number of passive constructions that correspond to English passives. He will therefore study the (transformational) origins of the construction in Serbo-Croatian, relate it to the active form, see how the passive is used, which are the areas that it covers in Serbo-Croatian but not in English (if any such exist) and which are the ones that the English passive covers while Serbo-Croatian does not, which verb-types undergo the transformation and what contextual limitations exist that may block it. The question of the agent will be considered, as well as any other questions that the linguistic material and/or available linguistic descriptions may throw up. But in his material he will find a number of other structure items that correspond (in the sense described above) to the English passive construction : they will include the Serbo-Croatian reflexive constructions,

and the analyst will go through the reflexive types in Serbo-Croatian that can substitute for English passives to determine under which circumstances the English passive construction finds its natural counterpart in Serbo-Croatian reflexive constructions. Another type of correspondence that his corpus will presumably enable him to establish will be between the English passive and the Serbo-Croatian active. Again, he will explore the possibility of making a generalized statement on the conditions in which this correspondence, rather than the E passive - SC passive, obtains. Having thus contrasted the two sets of correspondences, the analyst will try to draw certain inferences for the learning process. He will first warn that the range of application of the English passive transformation is much wider than the corresponding range of the SC passive and that, consequently, the student who wants to use English fluently and naturally will have to learn to "convert" certain types of Serbo-Croatian reflexive and active sentences to English passive forms. This will be seen as a point of interference or negative transfer which will require special care in the preparation of textbooks, course plans, etc.

To take another example, the analyst dealing with the different forms of modification in English will run across such examples as the condemned man and the condemned cell and will analyze them to show that one derives, roughly, from the man who is condemned and the other from the cell for the condemned, with interesting syntactic repercussions:

the man is condemned	*the cell is condemned
the man has been condemned	*the cell has been condemned
somebody has condemned the man	*somebody has condemned the cell

Turning to his translated corpus, he will find that the differences in English are faithfully represented in the Serbo-Croatian translation:

osudjeni čovjek	ćelija za osudjene na smrt

čovjek (koji je) osudjen na smrt	*osudjena ćelija
čovjek kojega su osudili na smrt	*ćelija koja je osudjena na smrt

As a matter of pedagogical interest, he will note that Serbo-Croatian remains closer to the kernel level in the second case (the cell for the condemned), and that the learner will have to be taught to make another transformational step if he is to produce idiomatic English. (It is noteworthy that contrastive analysis is extremely useful at a rather advanced level of foreign language learning - e.g. in the training of translators - where many other techniques fail: because nothing is apparently "wrong" with the cell for those condemned to death, except that it is in most cases unidiomatic for the condemned cell, the teacher finds it difficult to correct the student unless he can formally demonstrate what it is that English does and Serbo-Croatian does not do in cases like this and also perhaps give the reasons why osudjenička ćelija, though possible, is not likely to occur to the student as a model on which to base his English utterance.)

In discussing adjective uses in English, the analyst will comment on the syntactic potentials of certain adjectives in the predicative position: he will note that a number of predicative adjectives are expandable by to-infinitive phrases:

He is glad to teach.
He is sure to teach.
He is nice to teach.

But the nature of the expansion allowed by different adjectives will be different.

He is glad to teach.	He is sure to teach.	He is nice to teach.	He is nice to teach.
He is glad. He teaches.	*He is sure. He teaches.	He is nice. He teaches.	*He is nice. *He teaches.
*It is glad. He teaches.	It is sure. He teaches.	*It is nice. He teaches.	It is nice. *He teaches.
*It is glad. *Somebody teaches him.	It is sure. *Somebody teaches him.	*It is nice. *Somebody teaches him.	It is nice. Somebody teaches him.
*It is glad of him to teach.	*It is sure of him to teach.	It is nice of him to teach.	*It is nice of him to teach.
*It is glad that he teaches.	It is sure that he teaches.	It is nice that he teaches.	*It is nice that he teaches.
He is glad that he teaches.	*He is sure that he teaches.	He is nice that he teaches.	*He is nice that he teaches.
*To teach him is glad.	*To teach him is sure.	*To teach him is nice.	To teach him is nice.
*Teaching him is glad.	*Teaching him is sure.	*Teaching him is nice.	Teaching him is nice.

Translation equivalents will reflect the different syntactic interpretations of the original and permit us to establish different correspondences in each case:

On rado poučava.
On sigurno poučava. Sigurno je da on poučava.
Lijepo je od njega da poučava.
Njega je lijepo poučavati.

The pedagogic implications will again rest on the fact that Serbo-Croatian tends to stay closer to the kernel level than English. The interference of the mother tongue in the first two examples would not result in ungrammatical sentences (He gladly teaches. He surely teaches. It is sure that he teaches.) but would prevent the student from using adjectives in positions in which English normally employs them. In the third and fourth examples, the student would probably produce sentences that are available to the native English speaker at other levels of structure (It is nice of him to teach. vs. It is nice to teach him.) but are not the ones that we are trying to teach at this point.

It will be seen from the above examples that the proposed strategy does provide for the semantic side of syntactic description. It also provides for the use of the explanatory power of the transformational-generative approach - without necessarily committing the analyst to all the rigor of that approach.

But the approach will remain strictly formal, in the sense that structural items rather than units of meaning will serve as a starting point of analysis. A project that would keep content constant while studying interlingual differential patterning of expression units is a legitimate proposition but it is far from clear how it could be accomplished before more is known about what the units of content should be.

From the purely terminological point of view, I believe that the labels used should also reflect the fact that the units of form are the ones that we are dealing with; that is, terms like "reflexivity" and "passivity" would be

avoided and lables like "reflexives" and "passive" would be used instead. Functional entities like "subject" and "modifier" also properly belong to the kind of analysis proposed here. The fact that they may not be definable in the same way in the two languages is inherent in this approach: that is precisely why L_T has been chosen as the point of departure, with the translated corpus supplying the necessary L_S correspondents which may or may not all belong to the same category or class as that provided by the target language. Contrasting, in fact, consists in showing how a category or class of L_T differs from any and all of the categories and classes that systematically correspond to it in L_S, or for that matter from anything - including lexical items - that systematically corresponds to it in L_S. When there is no correspondence, there is no contrasting either: random translation equivalents are not contrastable. When the correspondence is zero or next to zero (as it seems to be in the case of certain article uses in English) contrastive analysis can be carried out only to a very limited extent. Complete correspondence, with all the features of the L_T item systematically reflected in L_S, is probably never achieved.

On the other hand, it is worth remembering that genetically related languages will display a considerable degree of correspondence (some of it also of the straightforward or one-to-one type) and will consequently be more easily describable in terms of a common metalanguage. One can only speculate whether linguistic universals, once they are more fully explored, may not provide the uniform metalanguage which is needed for contrastive analysis just as much as it is needed for many other kinds of linguistic work.

NOTES

1. One such project is the Yugoslav Serbo-Croatian-English Project of the Institute of Linguistics, Zagreb University, and the Center for Applied Linguistics, Washington, D.C., supported by the Ford Foundation, the U.S. Department of State, the Yugoslav Federal Commission for Cultural Relations with Foreign Countries, the Yugoslav Federal Council for Coordination of Scientific Research, and the Croatian Scientific Research Council.

2. E. Nida (1969), "Science of Translation", Language, 45 (3), pp. 483-98.

3. R. Jakobson (1959), "On Linguistic Aspects of Translation", On Translation, R.A. Brower, editor, Harvard University Press, Cambridge, Mass., pp. 239-39.

4. N.D. Andreyev (1964), "Linguistic Aspects of Translation", Proceedings of the Ninth International Congress of Linguists, Horace G. Lung, editor, Mouton, The Hague, pp. 625-37.

5. E. Haugen (1964), discussing Andreyev's "Linguistic Aspects of Translation", Proceedings of the Ninth International Congress of Linguists, Horace G. Lunt, editor, Mouton, The Hague, pp. 635-6.

6. D. Bolinger (1966), "Transformulation: Structural Translation", Acta Linguistica Hafniensia, IX, 2, pp. 130-44 .

7. cf. V. Ivir (1969), "Contrasting via Translation: Formal Correspondence vs. Translation Equivalence", The Yugoslav Serbo-Croatian-English Contrastive Project, Series B. Studies (R. Filipović, editor), 1, Zagreb and Washington: Institute of Linguistics, Zagreb University and Center for Applied Linguistics, pp. 13-25.

8. C. James (1969), "Deeper Contrastive Study", IRAL, VII, 2, pp. 83-95.

9. R. Filipović (1969), "The Choice of the Corpus for a Contrastive Analysis of Serbo-Croatian and English", The Yugoslav Serbo-Croatian-English Contrastive Project, Series B. Studies (R. Filipović, editor), 1, Zagreb and Washington: Institute of Linguistics, Zagreb University and Center for Applied Linguistics, pp. 37-46.

10. V. Ivir, loc. cit.

11. J.C. Catford (1965), A Linguistic Theory of Translation, Oxford University Press, London, 103 pp.

Jerry L. Liston (University of Texas - Austin)

FORMAL AND SEMANTIC CONSIDERATIONS IN CONTRASTIVE ANALYSIS[1]

1. Whether to base contrastive analysis on formal or semantic correspondences has been a subject of lively debate. The problem was touched on in the research guide for contrastive grammar[2] and discussed separately by V. Ivir (1969a) and L. Spalatin (1969) . According to these studies we are faced with a clear-cut choice between the two approaches, the formal, advocated primarily by Ivir, and the translational, defended primarily by Spalatin. There is reason to believe, however, that neither approach, as so far formulated, is adequate, in itself, for the kind of contrastive analysis contemplated[3], and that elements of each may have to be used. As this statement implies, the two proposals are not mutually exclusive, nor wholly contradictory.

In the first place, the points at issue have been formulated differently in different terms and with different frames of reference by the two authors. In the second place, largely different sets of data have been presented by them: substantive examples seem in many cases to have been selected specifically to prove argumentative statements rather than to illustrate the objective efficacy of the advocated approaches. In the third place, the two authors seem to have somewhat different assumptions about the scope and nature of contrastive analysis itself, and its relation to linguistic description Ivir(1969a: 15; Spalatin(1969:34) . In the fourth place, the two scholars seem to have different assumptions about the difficulties experienced by learners. The absence of detailed empirical data regarding types of mistakes regularly made by Yugoslav students of English make it very difficult to anticipate, in advance, the manner in which identifications

between analogous items in the two languages will be made by learners, especially if particular features are found only in one or the other language cf. Nemser and Ivir(1969: 4-5) .

In the fifth place, the very notions "formal" and "semantic" seem to be understood differently by the two investigators. What assumptions are to be made as work progresses about the relation between grammatical and semantic description, on the one hand, and between contrastive grammatical and semantic analysis on the other hand? To what extent are grammar and semantics to be regarded as autonomous? As congruent or separate? To what extent should we assume that the vocabularies of Serbo-Croatian and English contain structured sets which can be studied contrastively? It is interesting to note that both Ivir and Spalatin cite the fact that translation is not "rank-bound" as evidence in support of their own viewpoints Ivir(1969a:15), Spalatin(1969:26) .

In this paper, a critical analysis of the above-mentioned proposals for contrastive analysis will be followed by some suggestions about contrastive semantic analysis (lexis) . We hope to clarify some of the issues concerning contrastive grammar by showing the relevance of differential semantics and certain of its point of contact with differential grammar.

2.1. The Formal Approach

In this approach, as advocated by V. Ivir (1969a) , contrastive analysis in general is seemingly equated with differential grammatical as opposed to semantic analysis. By "formal" is actually meant, in this approach, formal-semantic or grammatical correspondences e.g. "tenses, plural markers, possessives, demonstratives, word order, etc." (1969a: 14) . A formal correspondence is defined, following Catford, as "any TL category unit, class, structure, element of structure, etc. which can be said to occupy,

as nearly as possible, the "same" place in the "economy" of the TL as the given SL category occupies in the SL."[4] What exactly is meant by these terms, particularly by "economy", in the definition is not specified by Ivir, but the definition is amended later to read "in the 'economy' of the text". This amendment is needed apparently to allow for correspondences revealed by the translated corpus which otherwise might not be recognized (1969a:17-18). For example, in a given cited context, it is felt that an E. adverb corresponds "formally" to a Serbo-Croatian adjective (Ibid.).

An important point is made by Ivir about the use of the translated corpus: given an L_t English sentence and its translation into an L_s sentence, it would be dangerous to base correspondences between analogous substructures in L_t and L_s on unrestricted translation equivalence, since various paraphrases of the "grammatically literal" sentence in L_s could be semantically equivalent to the English sentence.[5] While some L_s paraphrases of this type might present other interesting formal correspondences with the elements of the L_t sentence, others would offer few, if any, useful ones (20; 23-4). Therefore, Ivir rejects translation equivalence as the "starting point" in contrastive analysis except as the foundation of the translated corpus (13-14; 18-20; 23-4).

Despite his claim to do so, Ivir does not give detailed guidelines as to how to establish formal correspondences, although he describes certain types of spurious or apparent correspondences which should be ruled out. One type can result from mistranslation of the L_t sentence or element in the corpus (22); another type can result from the analyst's failure to compare elements in parallel constructions (21-2)[6]; and still others because of "structural shifts" involved in the process of translation (21-23). It is difficult to tell how one is to apply the notion of "structural shift": shift from what? from

the grammatically literal variant? Why is the correspondence E adverb SC adjective (17-18) not a structural shift? In fact, the borderline between genuine correspondences and those due to "structural shifts" appears to be indeterminate. Consider the following cited example:

(1) (i) E. : One student could remember the order of all fifty-two freshly shuffled cards after his first twenty-minute study of them.

(ii) SC. : Jedan student se mogao sjetiti poretka svih pedeset i dvije izmiješanih karata pošto ih je proučavao svega dvadeset minuta.

As Ivir analyzes it, "The accusative form of the personal pronoun ("ih") is the formal correspondent of the original of-construction("of them"), but it is impossible to say whether this is an example of systematic correspondence or a chance result of the changes that the original sentence has undergone in the process of translation" (23-my italics).

Finally, it is stated that it may be necessary in some cases to admit that a given feature in L_t (e.g. the English progressive) has no correspondent in L_s (e.g. Serbo-Croatian [22][7]. The implication here is that the L_t feature should not or cannot be contrasted with any analogous features in the L_s if an obvious grammatical correspondent cannot be found. This has theoretical implications which will now be mentioned.

On a theoretical level, the approach advocated by Ivir appears to be based on at least the following assumptions: (1) that instances in which a given grammatical property is possessed only by L_t or L_s are not properly a subject for contrastive analysis;[8] (2) that the "units" of contrastive grammatical analysis are the same as the units of grammatical description, and that cross-linguistic grammatical correspondences can be made on an empirical basis, while interlingual semantic correspondences are necessarily

intuitive (1969a:15); (3) that the units of meaning in semantics and grammar are qualitatively different and that the two disciplines are separate rather than intersecting and interrelated.[9]

Empirical data to validate the first assumption appear to be lacking. Observations by this author and others point to the opposite conclusion, at least pertaining to the article in English and aspect in Serbo-Croatian. For example, English-speaking learners of Serbo-Croatian experience interference traceable to the existence of the article in their native language and its absence in SC. A typical mistake observed even in the speech of English speakers who have mastered SC very well, e.g. after many years' residence in Yugoslavia, is:

(2) English-speaking Learner:

(i) SC (*) Došao je za vas jedan paket. ⇏[10]
(ii) Došao je za vas ∅ paket.
(iii) Cf. A package has come for you.
(not in a context requiring enumeration /"one" vs. "two", "three" .../)

In the case of Serbo-Croatian learners of English, there is a tendency for them to identify the SC imperfective aspect with the English progressive and then to use the latter in contexts in which the non-progressive form is indicated:

(3) Serbo-Croatian-speaking learner:

(i) E * "Every day I am paying for the milk." ⇏
(ii) "Every day I pay for the milk."
(iii) :Cf. Svaki dan plaćam za mlijeko.[11]

Ivir's view that contrastive grammatical analysis employs the same units as grammatical description is open to question. Not all scholars are so optimistic. For example, Lj. Mihailović cites what he terms the

methodological paradox of contrastive analysis in phonology:

> Tako dolazimo do metodološkog paradoksa, kontrastivne analize. S jedne strane, dva sistema koja pripadaju različitim jezicima uporedljiva su i samerljiva zato što i jedan i drugi jesu jezik. S druge strane, dva sistema koja pripadaju različitim jezicima nisu uporedljiva i samerljiva za to što i jedan i drugi jesu sistem. Koliko mi je poznato, lingvistika još nije našla ključ za rešenje ove teškoće. 1969:33

Given that elements in a grammatical system are defined by the paradigmatic and syntagmatic relations which they contract with other elements in the system, the problem of analyzing elements belonging to different system (with different numbers of elements and types of relations) is not necessarily the same as analyzing elements within the system to which they belong.[12] The question hinges not so much on whether the contrastive analyst makes reference to linguistic units such as morphemes, constructions, etc., but on whether the data of contrastive analysis are organized systematically in the same way as the data of a given language system. In view of the indeterminacy of the distinction between genuine and spurious formal correspondences, and the interplay between grammatical and semantic expression elements, it appears that a "theoretical" rather than a "practical" orientation toward contrastive analysis may be difficult to establish.

Ivir does not explicitly discuss semantic description nor differential semantics. His remarks about translation -- which he opposes diametrically to contrastive grammatical analysis as he interprets the latter -- concern translation as an activity rather than as a tool in differential analysis (except in terms of the construction of the CA corpus and the avoidance of correspondences based on unrestircted translation equivalences of sentences).

2.2. The Translational Approach

L. Spalatin asserts that contrastive analysis should be based on semantic equivalence rather than on formal correspondences. Spalatin concedes that structural units at various levels tend to show similarity in different languages. In fact, he gives a reasonably precise definition of formal correspondence with examples: L. Spalatin (1969:36).

Yet, observing that in many cases formal correspondences are difficult or impossible to find, Spalatin asserts that semantic correspondences are probably more frequent and reliable and that they should be used instead. Examples cited in which English and SC do not correspond are: the E. article, absent in SC, SC verbal grammatical aspect, rendered by heterogeneous devices in E. and instances in which the combination of grammatical and lexical devices do not match up in the two languages.

Cf. (4) (i) a phrase vs. a word
a E. Old man SC starac
b E. little boy SC dječačić

(ii) different lexical item vs. grammatical forms of the same word
a E. work SC raditi
b E. accomplish SC uraditi (Spalatin 29-36)

A similar example is, in fact, presented by V. Ivir in his discussion of E and SC adjectives. Strictly speaking, his practice in this instance, is inconsistent with the theory according to which "contrastively relevant" correspondences can only be "formal". Cf. E. "The animal ran wild" - SC "Životinja je pobijesnila" which are analyzed by Ivir as follows: "Here, Serbo-Croatian uses a verb that embaces the meaning of both the verb and the adjective in English. In teaching, such instances will best be presented as lexical units: pobijesniti-run wild." (1969.38)[13]

Discussing properties found systematically only in L_t or L_s, (e.g. the article in English, verbal aspect in SC) Spalatin accepts, in principle, the possibility of contrasting such grammatical categories e.g. aspect in SC with the combination of lexical and grammatical units used in the other language to express the same distinctions. On the surface this proposal seems to be as justified as the one whereby "old man" is treated as equivalent to starac or "run wild" as equivalent to probijesniti.

Unfortunately, the translational approach proposed by Spalatin also has some defects. First, it is intended to replace, rather than to supplement the formal approach; thus, it would fail fully to exploit the generally acknowledged fact that grammatical properties are to a large extent commensurable between the two languages. While his application of the term "semantic field" to the problem of contrastive analysis is interesting (see however 3), his conclusion that the translational approach alone is usable is subjective and too dogmatic:

> "We have tried to show that languages differ widely as regards the choice and distribution of the grammatical and lexical elements they utilize to cover their semantic fields, but that it is comparatively easy to establish semantic equivalences between the fields of various languages, which seems to indicate that contrastive relationships between languages are more profitably established if their equivalent semantic features are compared than if the comparison is based on their equivalent formal elements." (Spalatin 1969:35)

It is an exaggeration, moreover, to state that correspondences between analogous grammatical features in two languages are often established merely because of corresponding labels. "E personal pronouns are

contrasted with SC personal pronouns because of the similar terms used in the respective grammars to designate the two sets of items." (Spalatin 1969: 32).

However, the point is well taken that the use of grammatical labels may, in fact, influence the establishment of formal correspondences and that the analyst's intuition is definitely involved.

Other examples of only partial equivalence given by Spalatin are represented by tense forms and possessives. Cf. the English perfect in "I have lived here for five years" Semantic components of both past and present : SC present in "Živim ovdje pet godina"; E. simple past: SC preterit: I lived here for five years: Živio sam ovdje pet godina (p. 28). The English possessive modifiers in noun-phrases correspond often to ∅ or to a dative case form of the personal pronoun:

(5) (i) E. My father has arrived
(ii) SC. Otac mi je došao
(iii) ∅ otac je došao (p. 29)

(6) (i) E. Take your hand out of your pocket.
(ii) SC Izvadi ∅ ruku iz ∅ džepa. (33)

But with respect to the category of possession one can object that Spalatin has not, in fact, given an example of semantic equivalence (to the exclusion of grammatical equivalence). While it is true that mi belongs formally to the paradigm of personal pronouns, it also belongs grammatically in Serbo-Croatian to the paradigm of possessiveness. Thus, for this CA topic it can be said that the analyst has discovered a formal-semantic correspondence in the sense intended by the grammar research guide: namely,

an instance in which an English grammatical category "possessiveness" can be isolated and various SC analogues of this category found (Nemser and Ivir 1969:6-7).

Spalatin suggests that English and Serbo-Croatian are also non-isomorphic with respect to the proportion and functional load of derivational morphemes, as opposed to distinct lexical items. Data in this realm are scarce; thus Spalatin's very interesting but speculative hypothesis that in E. there is "heavier reliance on lexis", with more bases having narrower collocational ranges, while in SC there is a "predominance of grammatical (derivational elements" with fewer lexemes having correspondingly broader collocational ranges (30-1), must be viewed with skepticism. However, the theoretical possibility of finding such a general tendency reveals a strength of the "semantic approach" which he advocates, since the latter allows for the possibility that what is expressed grammatically in one language may be expressed lexically in another language, the resulting correspondences perhaps being contrastively significant.

Spalatin also applies the notion of non-isomorphic collocational ranges to instances in which separate lexical items -- as opposed to derivational series--correspond in both languages. His remarks lead to the discussion of the possibility of differential semantics properly speaking.

3.0. Contrastive Analysis of Semantic Systems

The possibility of contrastive semantics has been provided for in principle, but has not yet been discussed explicitly in publications of the Yugoslav-English Contrastive Project R. Filipović(1968:4; 1969d:2-3).

Some suggestions will now be made regarding the possibility of the contrastive analysis of the semantic systems of Serbo-Croatian and English. In particular, it will be asked whether the problems experienced by learners in mastering vocabulary items are comparable to those experienced in mastering grammatical patterns, and whether contrastive analysis would aid in the solution to these problems.

3.1. Semantic Structure

It will be assumed that within English or within Serbo-Croatian "at least some vocabulary-items fall into lexical systems, and that the semantic structure of these systems is to be described in terms of the paradigmatic and syntagmatic sense-relations holding between the lexical items." Lyons 1968:429 The sense of a word will be understood as "its place in a system of relationships which it contracts with other words in the vocabulary." (Lyons 1968:427). Examples of paradigmatic lexical sets in E are: 1) knock, bang, tap, rap; 2) green, blue, red, orange; 3) eat, drink, devour, consume; 4) arm, leg, hand, hair. Syntagmatic relations between words can be illustrated by such pairs as "kick...foot", "slap...hand", "blond...hair", "bark...dog" (cf. Lyons 1968:428). Among the types of sense-relations generally observed in languages are synonymy, homonymy, polysemy, and hyponymy (hierarchical structure).

In this paper I will be concerned with semantic fields, the isolation of which could be utilized in the discovery of certain lexical sets within Serbo-Croatian or within English. Since we are interested merely in illustrating types of interlingual correspondences, however, we will not, strictly speaking, make statements about such lexical subsystems. This qualification is necessary because cross-linguistic correspondences between vocabulary items

seem only to be specifiable in terms of rough similarity in application.

> "When items of different languages can be put into correspondence with one another on the basis of the identification of common features and situations in the cultures in which they operate, we may say that the items have the same application." (Lyons 434)
>
> "At the present time, the notion of application, like the process of translation, rests rather heavily upon the intuitions of bilingual speakers..." (Ibid.)

This reflects the fact that the notion of application (employed in establishing interlingual equivalences between words) , like the notion of reference, has to do with the relationship holding between words and the entities or events which they stand for (cf. Lyons 1968:427) . In contrastive analysis we shall be comparing and contrasting the application of selected words or sets of words assumed to be analogous in the two languages. Since semantic distinctions are intimately related to cultural patterns--in the anthropological sense of the term "culture"--the comparison of the application of words belonging to different languages involves making reference to the over-lap between the two cultures. As is well known, while the vocabularies of different languages contain lexical systems, the two vocabularies, in some fields at least, are non-isomorphic: "there are some semantic distinctions made in one langunge which are not made in another, moreover, ... particular fields may be categorized in a totally different way be different languages. This fact can be expressed in Saussurean terms by saying that each language imposes a specific form on the a priori undifferentiated substance of the content-plane." (Lyons:429)[14]

It will be assumed, therefore, that semantic correspondences will be established more or less intuitively by bilignual speakers and/or by investigators judging by native-speaker reactions and analysis of contexts in

corpus . However, such correspondences in the application of words in different languages are not "without any objective foundation, since bilingual speakers tend to be in agreement about the application of most words and expressions in the languages they speak." (Lyons 1968:434). The determination of such correspondences is assumed to be neither more nor less "intuitive" or "empirical" than that of grammatical correspondences, which are based on intuitive judgments of contrastive grammarians with the aid of native-speaker reactions and textual documentation.

3.2. Grammar and Semantics

According to the present conception, a grammar will be regarded from the semiotic point of view as a set of rules specifying permitted sign combinations, rules formulated in terms of classes of signs (grammatical classes). (Weinreich 1963:116). It will be assumed that the grammatical and semantic descriptions of a given language are autonomous but are intimately interrelated: only grammatical utterances with a specified grammatical structure will be analyzed semantically and it will be assumed that grammatical and semantic descriptions are congruent with respect to the units of meaning with which they operate.[15] This is confirmed by the fact that what is "grammatical" in one language can be "lexical" in another language. For example, the verbal concepts 'tense', 'mood', or 'aspect' are usually recognized as grammatical notions only in languages in which such distinctions are expressed by inflexional markers or particles whereby in many languages such distinctions are rendered by means of lexical items e.g. adverbs of time (Lyons 1968:317). One such language is Vietnamese:

Tôi đi về 'I am going/go home'
Tôi đã đi về 'I already go home'

$$= \text{'I} \begin{Bmatrix} \text{went} \\ \text{have gone} \end{Bmatrix} \text{home'}$$

Tôi sẽ di về 'I am about to go home'

In this language past and future tense is indicated by adverbs cf. also Hôm qua tôi di 'Yesterday I go (=went)' v. Hôm nay tôi di 'Today I go' .

This conclusion, which seems to follow from the arbitrariness of the linguistic sign, is reached also by E. Stankiewicz, who, using examples from Russian, shows that in the latter language different concepts can be represented by various grammatical forms (e.g. past time by either the preterite or the present) or on different linguistic levels, i.e. grammatically or lexically.

1. plurality a. by a grammatical category
   soldáty 'soldiers' baby 'women pejor. '
   b. through collective derivatives
   soldatnjá , bab' é
   c. by using quantifiers or "totalizers"
   herd, flock, bunch, etc.

2. male-female
   a. indicated derivationally
   volk wolf volčixa 'she-wolf'
   sekretar' 'secretary' sekretarša 'female secretary'
   b. indicated by different lexical items
   syn 'son' doč' 'daughter'
   byk 'bull' korova 'cow'

3.3. Differential Semantic Analsyis (Lexical Fields)

In addition to discussing the relation of grammatical and lexical correspondences, Spalatin refers to the "high specialization of E lexical items" as comparison with SC items, citing (among others) the following

examples (1969:31) :

E. light — SC lagan
   easy
SC heavy — SC težak
   difficult
E. turn off a light
   put out a fire — SC ugasiti
   quench thirst

But cases also exist in which the range of an English word is broader than that of the SC word, as for example:

E. to marry[16] — SC udati se of a woman
                   oženiti se of a man

E. battery — SC akumulator chargeable
              baterija dry-cell

E. hair — SC vlasi hair on the head
           dlaka hair on the body

Whether instances of broader collocational ranges in English words are more frequent than in SC words must be determined by empirical investigation. It is clear, however, that both cases are found and could conceivably cause interference problems for the learner.

We might conjecture that the greatest difficulty for the SC learner of E. would be in those instances in which the range of the E. word is narrower, since he must then learn an additional distinction (see below). However, it would be dangerous to assume that interference in the opposite direction could not occur (for example, the use by a SC learner of "accumulator" for a rechargeable battery since "accumulate, acculation," etc. exist in English in other senses).

At any rate the two types of overlap in the application of words exemplify instances in which the learner is likely "to make identifications between the L_t and L_s systems which then facilitate or inhibit learning." (Nemser and Ivir 1969:6).

Three examples will now be presented in which lexical interference due to different semantic ranges of word in English and Serbo-Croatian has been observed.

E.	arm hand	SC	ruka
E.	leg foot	SC	noga
E.	finger toe	SC	prst

In the case of ruka and noga one would expect the Yugoslav learner of English to use the terms hand/arm and foot/leg indiscriminately in each case until he has mastered the English distinctions,[17] while he might also refer to the "finger on the foot" or the "toe on the hand." Certain of these possibilities have been confirmed by observations.[18] The first learner observed, whose native language was Russian, was brought to the US at the age of 10. Now 30, he still fails to make the distinctions between "hand" and "arm" and between "foot" and "leg" correctly, although he has used English as his primary language for many years and has virtually no traces of grammatical interference in his English speech. The second mistake, observed recently in Zagreb, involved a Yugoslav professional person with a few years' study of English, speaking to her American friend during an hour in which only English was being spoken. Describing an accident in which a person's foot was injured, she used the expression "finger on the leg" (in place of

"his toe").[19] The lexical interference underlying such mistakes is obvious.

The third observation has to do with what can be called social formulas: set phrases used in situations such as meeting, taking leave, etc. Even in these situations, when conditions of cultural overlap are foregrounded, evidence of interference indicates that problems of relevance to contrastive analysis are involved. The following incorrect English utterances used by SC speakers were heard at an American office:

*Good morning, mister
Good morning, sir.
cf. Dobro jutro, gospodine
cf. Gospodin Popović

English has a suppletive alternation whereby mister Mr. occurs with a last name but sir is used as a call-form while in SC the same form can occur in both contexts.[20]

*Good morning, Mr. Jack
Good morning, Mr. Brown
Ø Jack

cf. Dobro jutro, gospodine Džek.

Serbo-Croatian does, while English does not, allow a title together with a first name[21].

In a carefully prepared textbook it should be mentioned that even such common terms as "good morning," "good afternoon," "good evening," etc. in English and Serbo-Croatian have subtle differences in their applications. For example, because of the earlier Yugoslav working hours, "dobro jutro" is used only until about 10 a.m. Thus, the American learner of Serbo-Croatian used to saying "good morning" until 12 noun, would very

likely be taken for a late-sleeper because of interference from his mother tongue.

Space limitations preclude the presentation of further observations of this type.

4. Summary:

A critical analysis of the so-called formal and translational approaches to contrastive analysis as advocated respectively by V. Ivir and L. Spalatin has shown that some aspects of each approach can be accepted while other aspects are invalid or spurious. We have agreed that grammatical correspondences can and should be contrastively studied, as long as "formal" is understood as "formal-semantic" (grammatical). This is best done by avoiding the use of unrestricted translation equivalence. At the same time we have found that the dogmatic insistence on formal correspondences can lead to two unsatisfactory results: (1) it will not allow for the differential analysis of interlingual equivalences in which the grammatical and lexical devices of the two languages do not match up starac - old man; pobijesniti - run wild but in which contrastive statements are clearly called for; (2) it will not allow for the differential analysis of grammatical features found in one language but expressed by heterogeneous devices in the other. On the other hand the dogmatic view that only semantic equivalence is valid will not provide for the full contrast of grammatical features using terms about whose content there is pretty general agreement among analysts: noun, adjective, subject, complement, etc.

A consideration of the semantic relation between words with analogous lexical fields in two languages has demonstrated that elements in the semantic systems of English and Serbo-Croatian can be meaningfully contrasted.

Instances in which both the Serbo-Croatian and the English word is broader have been analyzed and possible areas of interference mentioned and partially documented by observations.

In the absence of proof that the units of contrastive analysis are the same as those of linguistic description, we have assumed that both grammatical and semantic interlingual correspondences must initially be established intuitively but can be documented by informant and/or analyst responses and textual evidence. We have argued for a flexible approach to contrastive analysis in which a priori restrictions on the content of research should be avoided until further empirical data on types of errors made by SC learners of E are published. We have also suggested that either-or pronouncements about approach be replaced by careful statements about the linguistic factors involved in establishing correspondences at each stage in the investigation of particular research topics (cf. P. Ivić 1969:28-29).

NOTES

1. An earlier version of this paper, not intended for publication, was circulated among members of the Yugoslav Contrastive Analysis Project. That paper is superseded by the present one.
2. W. Nemser and V. Ivir, "Research Guide for Project Workers I. Morphology and Syntax," in R. Filipović, ed., Reports, 1969, p. 6.
3. "The Contrastive Analysis of Serbo-Croatian and English is being carried out at four linguistic levels: a. phonology, b. syntax, c. morphology with word-formation, d. lexis." R. Filipović 1969 d:2-3.
4. J.C. Catford, A Linguistic Theory of Translation, Oxford University Press, London, 1965, p.7.
5. By my term "grammatically literal" I mean the correspondences between the constituents of an E sentence in the active voice with a SC sentence

in the active voice with a SC sentence in the active, E subject-SC nominative case subject or E passive, SC passive, etc., rather than to correspondences such as E active-SC passive (cf. V. Ivir 1969:17 f).

6. One example cited here involves the SC gerundive and its possible correspondence, on the one hand, with the E participle and, on the other hand, with the E progressive preterite. The sentences quoted are:

E. As he was making his way across the fields...

SC. Dok se probijao poljima...

E. Making his way across the fields...

SC. Probijajući se poljima...

While it is wise to warn analysts against making uncritical identifications e.g. SC gerundive-E progressive preterite it is difficult to understand why it is concluded that the SC gerundive corresponds to the "whole clause" in E rather than to its verbal part alone. One could wonder also if there is not a correspondence here between SC probijati se and E to make one's way across cf. SC pobijesniti - E to run wild Ivir 1969b:36; See Note 13 below .

7. Cf. E I paid McSwiggin..., and I got what I was paying for...
SC Ja sam plaćao McSwiggina... a vjerujte da mi je to isplatio.

Quoting Ivir's some of comments: "It would be wrong to underline "se isplatilo" as a correspondent of "was paying" in this example... One could at this point legitimately ask whether the Serbo-Croatian text is a translation equivaent of the English text above; ... one answer might be that they are not equivalent, that the meaning contributed by the progressive tense has not been included in the translation, and that it cannot normally be included in Serbo-Croatian."

8. Cf. Nemser and Ivir 1969:4-5.

9. This is implied by the dichotomy insisted upon by Ivir in several places, between "contrastive analysis" of grammatical properties as realized by formal signals, and "translation." The latter seems to be conceived largely as an activity ef. the translation of War and Peace rather than as an analytical too . Ivir clearly opposes grammatical analysis to the type of semantic equivalence which is generally involved in semantic description,

implying that there is a sharp dividing line between the two . See Note 15

10. The convention followed here and elsewhere in this paper is: incorrect or deviant expressions are preceded by an asterisk and followed by an arrow leading to the correct expression.

11. Cf. M. Vlatković, "Elements of Aspectives in English", in R. Filipović, ed., YCASCE Reports, 1969, p. 70.

12. This follows from a basic assumption of structural linguistics "each language is regarded as a system of relations more precisely, a set of interrelated systems , the elements of which--sounds, words, etc. --have no validity independently of the relations of equivalence and contrast which hold between them." J. Lyons 1969:50 .

13. It is possible that such many-to-one correspondences between E and SC verbal expressions are systematic; cf. E to make one's way across, SC probijati se V. Ivir 1969a:21; see Note 6 above .

14. Cf. E. Stankiewicz 1962:2: "Language as a system does not convey experience but provides the formal grooves, the units and constructions through which experience is communicated in verbal messages. In the words of Sapir, it 'reflects not so much our intuitive analysis of reality as our ability to compose that reality into a variety of formal patterns.' (Language 1921:125)".

15. For a criticism of the view that particular semantic features can be assigned unambiguously to the grammatical or semantic components of linguistic description, see U. Weinreich 1966:404f. For the opposite view, see J. Katz and J. Fodor 1964:517-518.

16. This example was first brought to my attention by Mrs. M. Vilke.

17. The identification in such cases is between the referent of ruka for example, and either that of hand or that of arm. The student apparently learns either arm or hand first as equivalent to ruka. A contrastive description would present both together, warning the student of the additional distinction in English.

18. In the case of ruka and noga the observations of interferences reported here have been in the speech of a native speaker of Russian speaking English. However, Russian ruká and nogá are exactly parallel to the corresponding SC words with respect to the distinctions being discussed. I have benefitted from discussions with Prof. R. Filipović regarding examples of this type.

19. On correspondences of the type SC ø prst - E his toe see L. Spalatin 1969:33.

20. Mr. does occur as a call-form in American English but is sub-standard and very impolite. It is normally excluded.

21. "Gospodine Džek" is stylistically more familiar than "Gospodine Brown"; SC thus has a three-member opposition in address-forms:

    1. first name without title hearer referred to by ti
    2. title and first name hearer referred to by vi
    3. title and last name hearer referred to by vi

    Expressions of the type "Gospodine Džek" are frequently heard in the speech of bilingual Yugoslavs in Zagreb speaking English.

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Ljiljana Mihailović (University of Beograd)

ON DIFFERENCES IN PRONOMINALIZATION IN ENGLISH AND SERBOCROAT

We shall deal with a case of pronominalization where English discriminates between indefinite /specified and indefinite/ unspecified in the referential indices of noun phrases when pronominalizing, and Serbocroatian does not.[1] The terms specified and unspecified have been borrowed from Carlota S. Smith,[2] who, in connection with selectional restrictions between determiners and relative clauses, establishes three classes of determiners: Unique, Specified and Unspecified in order to distinguish them from the traditional definite and indefinite determiners. We shall not consider all the intricacies of a bundle of problems that involve reference,[3] nor shall we consider the theoretical justification for establishing referential indices, but we shall assume that NPs have such features as definite vs indefinite, specified vs unspecified, animate vs inanimate, etc. in their referential indices.

Before tackling the rules of pronominalization we shall first recapitulate some well-known facts. Definite NPs are proper names and NPs with the determiners: the, this, these, that, those. Indefinite noun phrases are NPs with the indefinite determiners: a, any, all, some, etc. Definite NPs are specified, by definition; while indefinite NPs can be either specified or unspecified.

The most general definition of pronominalization is "deletion under identity".[4] The definite pronouns being the most fundamental of anaphoric devices, we shall first state the rules of pronominalization

that produce definite pronouns both in E and SC:

(I) If two NPs : NP_a and NP_b (NP_a being the antecedent of NP_b) are coreferential, then NP_a can be used to pronominalize NP_b.

(1) Mary washed Tom and gave Tom his supper.	Meri je oprala Toma i dala Tomu večeru.
(2) Mary washed the boy and gave the boy his supper.	Meri je oprala dečaka i dala dečaku večeru.

The underlined NPs in (1) are coreferential and identical in all their features, so the first NP is used to pronominalize the second NP (in SC the case marker is different, which is not relevant for this discussion). The same holds good for the NPs in (2).

(3) Mary washed Tom and gave him his supper.	Meri je oprala Toma i dala mu večeru.
(4) Mary washed the boy and gave him his supper.	Meri je oprala dečaka i dala mu večeru.

In (1) and (2) both pairs of NPs are identical in all their features and they are definite, but in (5) and (6) the NPs are not identical in all their features though it is intuitively felt that they are coreferential.

(5) He has a red car.	On ima crvena kola.
(6) When did he buy the car ? [5]	Kada je kupio (ta) kola ?

Lakoff[6] states the conditions for coreferentiality in the following rule:

(II) " (272) Given two NPs, NP_a and NP_b:
If NP_a is an antecedent of NP_b and if NP_b is definite, then NP_a and NP_b are supposed to be coreferential. "[7]

As can be seen the conditions for coreferentiality are met in (5) and (6), so the NP in (5) is used to pronominalize the NP in (6).

(7) When did he buy it ?	Kada ih je kupio ?

In the above examples we have considered only NPs that have an individual referent and the feature [+ specified] in their referential indices, irrespective of whether they are definite or indefinite. But in:

(8) He hasn't got a car. On nema kola.

no referent can be established for the underlined NP and (9) could not be a sequence to (8) in the E sentence.

(9) *Why doesn't he buy the car ? Zašto ne kupi (ta) kola?

The only acceptable sequence is:

(10) Why doesn't he buy a car? Zašto ne kupi kola ?

As the NPs in (8) and (10) are indefinite, the condition for coreferentiality is not met, and consequently the NP in (8) cannot be used to produce definite pronominalization of the NP in (10). The only acceptable pronoun in E would be one.

(11) Why doesn't he buy one? Zašto ih ne kupi?

Before producing more evidence, we shall propose a tentative rule for the insertion of the indefinite one:

(III) Rules which produce the insertion of the indefinite one in E do not require identity of reference in NP_a and NP_b, NP_a and NP_b being both indefinite and unspecified.

In SC no discrimination is made between rule (I) and rule (III).

In (5) and (8) there is something in the sentences themselves that indicates whether the referent is established or not. Namely, if we state that somebody has something there is no doubt that the object exists and that at least one of the participants in the discourse knows of it; and vice versa, if it is established that someone does not have an object, then no referent can be established.

In positive existential sentences introduced by a non-locative there, the NP in the function of subject is established as specified.

(12) There is a book on my desk. — Na mome stolu ima knjiga.

(13) Will you pass the book to me, please ? — Molim te, dodaj mi knjigu.

So the condition for definite pronominalization is met:

(14) Will you pass it to me, please ? — Hoćeš li mi je, molim te, dodati ?

(15) I wish I had a car. — Voleo bih da imam kola.

In (15) the clause containing the indefinite NP is an embedded clause and it is dominated by (subordinate to) a modal construction which marks it as being counterfactual.[8] As the NPs in (15) and (16) have no referent and therefore must have the feature unspecified in their referential indices, the only way to pronominalize the E NP in (16) is by inserting one.

(16) Why don't you get a car ? — Zašto ne nabaviš kola?

(17) Why don't you get one ? — Zašto ih ne nabaviš?

There are sentences where the NP can be interpreted either as specified or unspecified. Some further knowledge is required in order to pronominalize correctly.

(18) She wants to marry a Swede. Želi da se uda za Švedjanina.

If the NP a Swede is understood as a description of a specific individual, i.e. a certain Swede, then the following reply to this statement is acceptable:

(19) Where did she find him? — Gdje ga je našla ?

But if the NP a Swede has not been established as an individual having a specific referent, but refers to one of a set, then the phrase must be pronominalized by inserting one, him being unacceptable. In SC the definite pronoun is used in both cases.

(20) It is not easy to find one. Nije ga lako naći.

In (20) one has been substituted for the indefinite and unspecified NP a Swede in :

(21) It is not easy to find a Swede. Nije lako naći Švedjanina.

(22) What about her boy-friend if she has one? Šta je sa njenim dečkom ako ga ima?

In (22) the NP which has a possessive determiner can be interpreted as unspecified only in the context of the if-clause which contains an unspecified NP. If we established:

(23) What about her boy-friend if she has a boy-firend? Šta je sa njenim dečkom ako ona ima dečka ?

as the underlying structure of (22), we should have the possessive in the first NP and the indefinite article in the second NP. It seems to us that although (23) is acceptable as one of the intermediate structures in the process of transformational rules, the rules for the insertion of one would not be sufficiently general if we accepted (23) as the underlying structure of (22). Therefore we propose the following underlying structure for the two NPs in (22):

(24) What about someone who is her boy-friend if she has someone who is her boy-friend?

E. Bach[9] develops rules that derive nouns from underlying relative clauses which are based on the predicate nominal constituents, elements such as someone, something, the one being in the base of such derivations.[10] Transformational rules for the derivation of NPs from relative clauses based on indefinite pronouns delete the indefinite pronoun and the copula is, leaving only the predicate nominal constituent. So we are left with two identical NPs which have in their referential

indices [- definite, - specified]. If we delete the second NP and insert one we get (22) :

What about her boy-friend
if she has one?

So far we have dealt with NPs that either had an individual referent that could be established or NPs where the individual referent could not be established. We shall now consider NPs where the referent is established in the mind of the speaker. In

(25) If you buy a car I'll drive it.	Ako kupiš kola ja ću ih voziti.

though the NP a car does not have an individual referent it is used to pronominalize the second NP producing a definite pronoun. In (25) the reference is established in the mind of the speaker, so that the second NP can be coreferential:

(26) If you buy a car I shall drive the car.	Ako kupiš kola ja ću voziti kola.

in which case the conditions for definite pronominalization are met and (25) is an acceptable English sentence. On the other hand in:

(27) If John buys a car, Mary will buy a car.	Ako Džon kupi kola, Meri će kupiti kola.

although there is a possibility of establishing reference in the mind of the speaker for the first NP, the NP in the containing clause and the NP in the contained clause cannot be coreferential, as they do not refer to the same individual referent, so that the conditions for definite pronominalization are not met and the deletion of the second NP entails the insertion of one.

(28) If John buys a car, Mary will buy one.	Ako Džon kupi kola i Meri će ih kupiti.

Even in

(29) I wish I had a car.	Voleo bih da imam kola.

where the NP in the contained sentence is dominated by I wish, which presupposes something that is hypothetical, reference can be established in the mind of the speaker and the repeated NP can be definite and in consequence coreferential.

(30) Who would drive the car? Ko bi vozio (ta) kola ?

So the conditions for definite pronominalization are met:

(31) Who would drive it? Ko bi ih vozio ?

On the other hand if the reference is not established in the mind of the speaker, (32) could be a continuation of (29):

(32) Why don't you get a car? Zašto ne nabaviš kola ?

in which case one is inserted after the deletion of the underlined NP.

(33) Why don't you get one? Zašto ih ne nabaviš ?

We shall now try to formulate the rule for the insertion of the indefinite pronoun one.

(IV) Given two NPs; NP_a and NP_b where the head nouns are identical lexical items, if the NP_b is indefinite and unspecified then the two NPs cannot be coreferential, so the NP_b is deleted and the indefinite one is inserted.

Considering the following example and keeping in mind both the rules for definite and indefinite pronominalization:

(34) You are lucky to have a family. Srećan si što imaš porodicu.

And you are lucky not to have one. A ti si srećan što je nemaš.

it seems to us that both under the rules of definite and the rules for indefinite pronominalization, it is the referential index of NP_b (the repeated noun phrase) that determines the choice of the pronoun.[11] In the sentence underlying (34) the first NP is indefinite, but it is specified, the repeated NP is indefinite and unspecified:

(35) You are lucky to have a family.
You are lucky not to have a family.

so no coreference ca.. be established, so that the repeated NP is decisive for the choice of the pronoun one.

It would be in place to mention that whereas definite pronouns have distinctive forms for animate/inanimate (it vs. he, she) and for masculine/feminine (he vs. she), the indefinite one does not distinguish either animate/inanimate or masculine/feminine, being a pronoun susceptible only to the contrast of definite/indefinite and specified/unspecified in the referential indices of the NPs it substitutes.

SC does not have two rules for pronominalization, the definite pronouns meeting both the rules for definite and indefinite pronominalization. We should like to mention that SC can sometimes have zero both as an equivalent of an E definite pronoun and the indefinite one.

(36) John hasn't got a pen.	Džon nema pero.
(37) I'll give him one.	Ja ću mu (ga) dati.
(38) There's no armchair in his room.	Nema naslonjače u njegovoj sobi.
(39) There should be one.	Trebalo bi da ∅ bude.
(40) Could you lend me a box of matches.	Da li biste mi mogli pozajmiti kutiju šibica.
(41) If I had one, I'd lend it to you.	Da ∅ imam uzajmila bih ti ∅.

The zero form in SC can be used as a variant of the definite pronoun usually after certain verbs which allow optional deletion of the NP in the function of object, such as dati, pozajmiti, kupiti, doneti, etc. The English counterparts of the stated verbs do not usually allow the deletion of the objec. NP.

The fact that SC NPs behave differently from E NPs under pronominalization is of theoretical as well as practical interest. Further research concerning referential indices of NPs in SC would yield results that would

probably shed more light on problems of universals in grammar.

The practical implications of the subject treated above are obvious. The treated point of contrast in the two languages will result in predictable interferences, and it should be tackled so that the difference between specified and unspecified in indefinite NPs is made clear. Carefully constructed contrastive drills should follow explanations and illustrations of the rules.

From the point of view of a SC learner of English, the so-called "personal pronoun paradigm" should include the indefinite pronoun one, as the SC counterpart of one is to be found in the personal pronoun paradigm. In this way the learner would find the counterparts of the L_s language elements where he expects to find them and before he commits errors.

NOTES

1. Further in the text noun phrases will be refered to as NPs, English, as E, and Serbocroatian, as SC.
2. Carlota S. Smith, "Determiners and Relative Clauses in a Generative Grammar of English", Language, 40 (1964), 37-52.
3. In his unpublished paper "What do Referential Indices Refer To ?",1968, p. 2, Lauri Karttunen mentions a number of features in noun phrases that involve the idea of reference and modification:
   - (i) definite vs. indefinite noun phrases,
   - (ii) generic vs. non-generic noun phrases,
   - (iii) specific vs. non-specific noun phrases,
   - (iV) anaphoric vs. deictic noun phrases and pronouns, and
   - (V) restrictive vs. appositive relative clauses and modifiers.
4. John Robert Ross, "Constraints on Variables in Syntax", unpublished dissertation, MIT 1967.

5. Pronominalization does not occur here within the same sentence, but it is a well-known fact that pronominalization can be dealt with only in the context of a discourse.

6. George Lakoff, "Pronouns and Reference", unpublished paper 1968, 87.

7. Lakoff, op.cit., 88, argues further that "One can eliminate coreferentiality from these conditions simply by indicating that the anaphoric NP must be definite". Though this would make the rule more economical, it is much simpler for us not to dispense with the notion of coreferentiality, as will be seen from further discussion.

8. The example has been borrowed from Lauri Karttunen, op.cit., 4.

9. Emmon Bach, "Nouns and Noun Phrases", Universals in Linguistic Theory, (eds. Emmon Bach and Robert Harms), New York 1968, 91-122.

10. Later Bach (op.cit., 111 and 121) dispenses with actual pronouns and referential indices assumed to occur with nouns, and proposes that they should be replaced by a system of operators and variables which can be used to tie together sentences underlying a complex sentence.

11. We have ignored here the conditions for backward pronominalization and the notion of "command" as formulated by Ronald W. Langacker ("On Pronominalization and the Chain of Command", unpublished paper, San Diego 1966) and have assumed that pronominalization rules always work forwards, as backward pronominalization is not relevant for this discussion.

Charles E. Bidwell (University of Pittsburgh)

SERBO-CROATIAN NOMINAL INFLECTION

0.1 The purpose of this study is to describe the inflection of nominal words, subsuming nouns, pronouns, numerals, and adjectives, in contemporary standard Serbo-Croatian.[1] Only the prosodic (stress and length) morphophonemics of the noun have been excluded from this paper, as I have treated this topic at length in another article (Bidwell, 1969c). This study is based in part on the standard handbooks listed in the bibliography, but checked against the usage of native speakers.[2] Surprisingly, in view of Vuk Karadžić's famous injunction "Write like you speak; speak like you write," (the choice of conjunction here is intentional!) native Serbo-Croatian grammatical writing is dominated by a strong normative tradition. Ironically, in jealously striving to preserve and impose as a standard the grammatical system expounded by Vuk on the basis of his own and related dialects of the day, Vuk's successors have proved unfaithful to the substance of the great grammarian's thought. Hence, the handbooks are not always reliable as indicators of spoken standard usage and I have also relied heavily upon the evidence supplied by linguistic informants, in first line my wife, Natascha Bidwell, née Dragutinović; born in Valjevo, Serbia, but raised in Belgrade and a speaker of the koiné of that city. The spoken standard, as distinct from the language of belles lettres, I define as the variety of speech used in informal and semi-formal communication by persons who have completed at least secondary schooling (gymnasium). This may not be the only speech variety used by such persons; on some occasions local dialects may be employed (which of course are not treated here). Naturally, a standard defined in this manner cannot present the petrified uniformity posited / desired by some normativists; there is considerable regional and even

idiolectal variation. My observations, however, obviously cannot have covered every possible variety of standard language, but in the nearly two decades that I have been studying Serbo-Croatian, I have come in contact with speakers from many regions; most, it happens, have been heavily influenced by the Zagreb or Belgrade koinés -- in itself perhaps an indication of the prestige value of the current speech of the two great cultural centers.[3] This outline then aims to describe the current spoken standard in line with the descriptivist, non-normative tendency characteristic of much of American structural linguistics.

0.2 It must be emphasized that formal standard Serbo-Croatian has two basic variants of equal prestige and normative "correctness". The variants are termed ekavski (in which the Common Slavic phoneme jat´[æ] has coalesced with /e/) and ijekavski (here jat´ has given other reflexes; corresponding to ekavski /e/ from jat´ we have /je/ (rarely /i/), to long /ee/ from jat´ we have /ije/ or/jee/).[4] As my principal informant is an ekavski speaker, I have taken that variety as basic; however, whenever the ijekavski form differs, I give it in parenthese following the ekavski citation, thus: mlcéko (mlijéko) "milk".

0.3 The phonemic analysis underlying this study is based on that by C.T. Hodge and posits the following segmental phonemes:

vowels			consonants								
i		ə	u	p	t				k		
	e		o	b	d				g		
		a		f	s			š	h		
				v	z			ž		l	r
					c		ć	č		j	
					dz		đ	dž			
				m	n						

Digraphs are used to symbolize unit phonemes for graphic convenience.[5] "Vocalic" r is analyzed as /ər/. Vowel length is analysed as a geminate vowel, i.e. a sequence of two identical short vowels; traditional "falling" stress as a single stress, traditional "rising" stress as a double (geminate) stress having two syllables as its domain.[6] Thus:

CáC	traditional short falling accent	/pás/	"dog"
CáaC	traditional long falling accent	/gráad/	"city"
CáCá	traditional short rising accent	/žéná/	"wife, woman"
CaáCá	traditional long rising accent	/mleékó/	"milk"

Since traditional Serbo-Croatian orthography is very nearly phonemic, nearly phonemic, all Serbo-Croatian material in the following outline is cited in phonemic notation. In the few cases where full sentences (rather than individual words or morphemes) are cited however, conventional punctuation and capitalization are used, though phonemic notation of the segmentals is retained.

0.4. The following morphophonemic rules are of importance for the nominal inflection system.

Automatic rules:

(a) Voicing assimilation: The last consonant, non-neutral with regard to voicing in a sequence of consonants unbroken by vowel or major juncture, determines the replacement of preceding non-neutral consonants within the sequence to agree with it in respect to voicing. Voicing neutral consonants are /m n r l j/; /v/ is neutral in respect to preceding consonants, but undergoes replacement by its voiceless counterpart /f/ if followed by a voiceless consonant. od-plat-a → ótplata "payment".

In respect to a preceding consonant, /h/ is voiceless; it has no voiced counterpart, so when followed by a voiced consonant, it remains.

(b) Palatal assimilation: The dentals/s z/ followed by the palatal consonants /š ž č dž ć đ/ or sequences /lj nj/ without intervening juncture assimilate to palatal position, becoming /š/ and /ž/ respectively.[7]

(c) Reduction of geminate consonants: A sequence of identical consonants (including a geminate sequence which would result from application of palatal or voicing assimilation) is replaced by a single such consonant. bez-zaakon-j-e becomes bezaákónje "lawlessness".

(d) Geminate vowel followed by /o/ resulting from the change /l→o/ is reduced to a single vowel. Nsg.f. beélá vs. Nsg.m. béo "white" (ijekavski bijélá vs. bío).[8]

(e) Loss of dental stop before affricate. /t/ or /d/ plus affricate is replaced by zero plus affricate. Nsg. ótác vs. Gsg. ócá from stem ot[a]c- "father".

Non-automatic rules:

(f) The dental stops /t d/ fall in the environment between /s z/ and /n/: Nsg.m. částan vs. Nsg.f. čásna from the stem čast[a]n- "honorable". This is very nearly automatic, exceptions being a number of recent loans such as Nsg.f. prótestna "of protest".

(g) Morpheme final /l/ is replaced by /o/ before consonant or word boundary. Gsg. póslá vs. Nsg. pósáo from stem pos[a]l- "task, affair", Nsg. prátilac vs. Gsg. prátioca, "accompanier". But cf. mólbá "request", hótél "hotel".

(h) "Inserted" or "movable" /a/. In many (but not all) morphemes ending in certain consonant clusters, /a/ is intercalated between the final consonants when word boundary (usually with zero ending) or consonant follows. Examples: pósáo, prátilac, ótác in (e) and (g) above. In citing stems, "inserted" /a/ is enclosed in square brackets: ot[a]c- "father". When /l/ does not have a vowel adjacent on at least one side, /ə/ is automatically inserted; thus bicikl-

"bicycle" becomes bicikȁl before Nsg. zero ending (but Gsg. bicíklā). Naturally, this change does not occur if /a/ is inserted (pos[a]l- "task, job", Nsg. pósāo); note that if the non-automatic change occurs, it supersedes the automatic change, since by its occurrence it removes the phonotactic conditions requiring the automatic change (see Bidwell 1969b, p. 13 for a discussion of this problem).

(i) I-change: /k→c, g→z, h→s/ before elements beginning with /i/, e.g. Nsg. čéh vs. Npl. čési "Czech".

(j) J-change:

t	→ ć	d	→ đ
c, k	→ č	z, g	→ ž
s, h	→ š		
l	→ lj	n	→ nj

Labial consonants add /lj/, thus /m p b v→mlj plj blj vlj/. Example of J-change: Nsg. bóog vs. Vsg. bóže "God". Note that when one of the above consonants follows /s/ or /z/, the latter undergo palatal assimilation upon J-change of the consonant they precede; cf. mȁast "fat" Isg. mȁaščū.[9]

(k) /o~e/ alternation. Morpheme initial /o/ in certain suffixes is replaced by /e/ after elements ending in the palatal consonants /j ć đ š ž č dž c/: Nsg. pólje "field" (cf. zlāato "gold"). Various processes have disturbed the purely phonological conditioning of this alternation, so that in some cases /e/ occurs after non-palatal consonant and /o/ after palatal consonant in environments where this alternation is expected.

1.0 The Noun.

Serbo-Croatian nouns are declined in terms of two number categories, singular (sg.) and plural (pl.), and of six case categories, nominative (N),

genitive (G), accusative (A), dative (D), instrumental (I), vocative (V). Every Serbo-Croatian noun further inherently belongs to one of three gender categories, masculine (m.), feminine (f.), or neuter (n.); gender is a concord category, the gender being determined by the form of potential modifiers and by pronoun replacement.

1.1 Serbo-Croatian nouns fall into three declensional classes, according to ending of the genitive singular case, class A -ee, class 0 -a, class C -i (mnemonic: A nouns have -a in Nsg., C nouns have consonant plus ∅ in Nsg.).[10] The following endings occur:

Nominative singular. Type A nouns have -a, excepting certain masculine personal names and kinship terms, which in the western part of the Serbo-Croatian area (see 1.2) have -o or -e, and certain feminine names from classical mythology with -o (e.g. klío "Clio", Gsg. klíjee). One noun (with stem extension /iːer/, see 1.3.3) has zero ending in NAsg., while foreign feminine names terminating in a consonant may have zero in Nsg. with A endings in the remaining cases, though they are usually treated as indeclinable (1.7), thus níves "Nives", Gsg. nívesee or níves. Type 0 masculine nouns (0m) have, in the overwhelming majority, zero. Some have -oⁿ-e, chiefly masculine personal names, e.g. máarko and a few others such as čikaágo "Chicago", kóngo "Congo". The two month names júlijúl "July" and júnijún "June" have an alternate nominative ending -i (~∅). Type 0 neuter nouns (0n) take the ending -oⁿ-e. Nouns with the stem extensions -en- or -et-, e.g. íme Gsg. ímena "name", kanápé Gsg. kanápéta "couch" (1.3.3), take the ending -e; otherwise -e occurs after stem final palatal consonant and -o elsewhere. The neuter noun dóba "age, period" is treated as indeclinable by most speakers; however, it is declined by some with the ending -a in NAsg. and the usual 0n endings in the remaining cases. Type C nouns have zero in the Nsg.

Accusative singular. Only type A nouns have a separate form (with the ending -u) for the Asg. Class C nouns, Class 0n nouns, and Class 0m nouns which denote inanimate objects (0m inan.) have in the Asg. the same form as the Nsg. 0m nouns which denote living beings (0m anim.) have in the Asg. the same form as the Gsg.

Genitive singular. As stated above, Class A nouns have -ee in this case, Class 0 -a, and Class C -i.

Dative singular. Class A and C nouns have the ending -i, Class 0 nouns -u. In some varieties of the standard language class 0m and C nouns show a stress difference after prepositions (former locative) from the non-prepositional form (former dative).[11]

Instrumental singular. Class A nouns have -oom, Class 0 nouns -om~-em, Class C have -i or -ju~-Ju; -ju after stems ending in /r s z š ź č dž/, and -u after stems in the remaining consonants with J-change of preceding stem-final consonant provided that the consonant is susceptible to such change.

Vocative singular. Class On nouns, as well as class A and 0m nouns with -o or -e in Nsg., have the same ending in Vsg as in Nsg., though stress may differ. There is also a tendency for many other Class A and Om nouns to use the form of the Nsg. in vocative function, rather than a separate vocative form. (e.g. marĺjá "Mary", lúuka "Luke"). These particularly include many personal names and kinship terms, especially those with lengthy stems. Otherwise A noun have -o, except that nouns with the suffix -ic- and a few others have -e rather than -o in the V. Some pejoratives with this suffix however show free variation of -o with -e in V. Class 0m nouns have -e or -u, -u occurring mainly after the palatal consonants and, alternatively with -e, after the velars and some others. Before -e, stems in /c/ and the velars /k g h/ undergo J-change, as do two in /z/, knéez V knéeže "prince" and vĺteezV vĺteeže "knight".

Class C nouns have -i in the Vsg.

In example paradigms below, the vocative is usually not listed separately where it has the same ending as the nominative, i.e. in 0n nouns and in all plural forms.

As may be seen from the foregoing, there is a tendency in class A and 0 to eliminate the Vsg. as a separate case, substituting for it the endings of the Nsg. Where separate vocative endings are retained, there is often considerable variation among individual speakers in the choice of ending in the absence of clear-cut phonological criteria for such choice.

Vocative plural. There is no separate Vpl. form. All nouns have the same ending in Vpl. as the Npl. In an extremely small number of nouns however, Vpl. may be distinguished from Npl. by stress: cf. Nsg. žéná "wife , woman", Npl. žéné, Vpl. žéne.

Nominative plural. Class A nouns have -e in the Npl. Class C nouns have -i. Class 0n nouns have -a and 0m nouns have -i.

Accusative plural. Class A nouns, class C nouns and class 0n nouns have the same form in the Apl. as in the Npl. Class 0m nouns have the ending -e in the Apl. (i.e. the same ending as class A nouns have in both N and Apl.)

Genitive plural. Most nouns of classes A and 0 have the ending -aa in the Gpl. A fair number of nouns of these two classes have the ending -ii, especially after stems ending in consonant clusters. Class C nouns all have -ii. Usage in this respect varies from idiolect to idiolect and with very many words the use of either ending is acceptable in the standard language. Thus, máraakaa~márkii "of stamps" but only sestaárâa "of sisters". Some few words have the endings -uu or -íjuu in the Gpl. These are: Class A rúkúu~ruúkáa "of hands", nóguu~noógáa "of legs"; Class 0m pə́rstíjuu~pə́rstíi~pə́ərstaa "of fingers", góstíjuu~góstíi "of guests", nóktíjuu~nokaátáa "of nails"; Class C: kokóšíjuu~

kokóšši "of chickens"; mixed class (class C in plural): óčjuu~óčči "of eyes", úšjuu~úšši "of ears". The vowel of the syllable preceding the ending variant -aa is automatically lengthened.

Dative and Instrumental plural.

In these cases class A nouns have the ending -ama, class 0 and C nouns have the ending -ima. In some (archaic) varieties of the standard language this ending is truncated to -ma (in conjunction with which variant, ending stress is automatic) after the suffix -aad- and after a few other stems.

Table of endings:

	A	On	Om	C	
sg.					
V	(-a), -oo~-e	-o ∽ -e	-e ∽ -u	-i	V
N	-a		-ø		N
A	-u		∽		A
G	-ee	-a		-i	G
D	-i	-u			D
I	-oom	-om ∽ -em		-i ∽ -ju ∽ -Ju	I
pl.					
N	-e	-a	-i		N
A			-e		A
G	-aa (∽ -ii)			-ii	G
DI	-ama	-ima (∽ -ma)			DI

The symbol ∽, as used in this table, signifies that the Asg. of animate nouns is identical with the Gsg. and the Asg. of inanimate nouns identical with the Nsg.

1.2 Distribution of genders.

Gender is determined strictly by two factors: syntactic congruence (agreement of attributes and predicate complements) and pronoun replacement. Thus:

Náša máajka je dóbrá. Óná nas vólii. (feminine)
Nášo ótáco je dóbaro. Óon nas vólii. (masculine)

Agreement and pronoun replacement indicate masculine and feminine genders respectively of máajka "mother" and ótác "father".

Type A nouns are in their overwhelming majority feminine; a restricted subgroup of this type is of mixed gender: Type Am contains masculine common nouns (slúuga "servant", páapa "pope", vládika "(Orthodox) bishop", táta "papa", súdija "judge", mladóžénja "bridegroom"), including nouns with the borrowed (Turkish) suffixes -li- and -dži-, formerly, and still to some extent, a quite productive category: paraájlija "fellow with a lot of money (slang)", nišlija "man from Niš", saájdžija "watchmaker", mlekádžija "milkman", and a number of masculine personal names: flija "Elias", lúuka "Luke" mika "Mike (nickname from miháilo)". These nouns are of masculine gender in the singular, but feminine in the plural. In the Western part of the Serbo-Croatian speech area, a number of masculine personal names have the endings -o or -e in NVsg. and are otherwise declined as type A nouns; they too fall in subgroup Am: ivó, ivé "Johnny". Type 0m nouns are masculine, 0n neuter, and C feminine.

1.3. Stem shape.

Stems consist obligatorily of a root with which there may occur one or more prefixes and/or suffixes. The overwhelming majority of nouns contain

but one root, though there is a class of compound stems containing two (or more) roots.[12] There follows an analysis of the constituents of the words žéná, rát, rázgovoor, proízvód, óbrana, óbrázac, bibliotekaárstvó, lúkobraan:

STEM		ENDING		
prefix(es)	root(s)	suffix(es)		
--	žén-	--	-á	wife, woman
--	rát-	--	-ϕ	war
ráz-	govoor	--	-ϕ	conversation
pro-íz-	vód-	--	-ϕ	product
ó-	bran-	--	-a	defense
ó-	bráz-	-[a]c	-ϕ	pattern
--	bibliotek-	aár-stv-	-ó	librarianship
--	lúk-o-braan-	--	-ϕ	breakwater

A stem normally ends in a consonant. Exceptions are recent foreign borrowings which may have stems in vowels; such stems in vowels are usually incorporated into class 0m:

Nsg.	atáše	Gsg.	ataše	Npl.	atašé	attaché
	nívo		nivá		nivó	level
	rágú		ragú		ragú	ragout
	bóa		bóe		bóe	boa

1.3.1 Inserted vowel.

In many stems ending in a consonant cluster there occurs an /a/ between the final consonants before zero ending and before genitive plural ending -aa. The /a/ is replaced by zero (i.e. does not occur) elsewhere (i.e. before other endings). Before -ϕ the inserted vowel is short, but, as with all syllables before Gpl. -aa, it is long /aa/ before that ending. So, Nsg. (zero ending) maáčák Gsg. maáčká "tomcat", séstrá Gpl. sestaára "sister". In some items there is considerable individual variation in occurrence of inserted /a/: Nsg.

kóncért~kóncérat "concert". There is also a tendency in the Gpl. to use, with stems ending in a cluster, the ending -ii, before which inserted /a/ does not occur, rather than -aa: Nsg. bróojka "figure" Gpl. bróojkii~brójaakaa. Naturally, the usual automatic morphophonemic changes take place within the stems in those forms without /a/:[13]

Stem	ot[a]c-	"father"	Nsg. ótác	Gsg. ócá (/t/+/c/ → /c/)
	klub[a]k-	"lump"	Nsg. klúpko	Gpl. klubaáká

1.3.2 Stem-final consonant alternations.

Before endings beginning with /i/ (except the Gpl.), stem-final velar consonants undergo I-change. The cases affected are Dsg. of class A, Npl. of class 0m and DI pl. of class 0; class C nouns are unaffected as they have no stem ending in velars. There is some tendency to abandon this change in class A nouns; personal names and kinship terms as well as stems ending in consonant clusters often do not show this change. There is a greater tendency to abandon this change in stems in /h/ than in those ending in the other two velars /k g/. In many items there is considerable personal and regional variation.

Examples:

júnaak	"hero"	Npl. junaácí	DIpl. junaácíma
nosóróg	"rhinoceros"	nosórózi	nosorózíma
čéh	"Czech"	čési	čésima
bláago	"treasure"		bláazima
máajka	"mother"	Dsg. máajci~máajki	
slúgá	"servant"	slúzi	
epóhá	"epoch"	epóhí~epósí	

J-change occurs only in stems ending in velars or /c/, before the ending of the Vsg. (bóog "God" Vsg. bóže, ótác "father" Vsg. óče) and in the alternation of a few stems (turk- "Turk" Nsg. túrčín, Npl. túrci, Gpl. túraakaa, óko "eye", úho "ear" Npl. óči, úši).

A stem-final /j/ is lost before ∅-ending in the case of a number of recent foreign borrowings (which in the source language ended in /i/):

Nsg.	táksi	Gsg. táksija	taxi
	vérdi	vérdija	Verdi

Not all stems in /ij/, of course, drop /j/ before zero ending. Thus káalcij "calcium", káalij "potassium", náatrij "sodium" and others do not.

1.3.3 Stem extensions.

The type C noun kéñi "daughter" and the A noun máti "mother" have the stem final element /-i-/ (in N)~/-er-/ (in remaining cases). In kéñi furthermore, the stem extension vowel is lengthened before ∅ (NAsg) and the Isg. ending -ju.

Thus:

N	kéii~(kéer)	VN	máti		
A	kéer	A	máter		
VGD	kéri	G	máteree	D	máteri
I	kéerju	I	máteroom		

In colloquial speech these nouns are almost entirely replaced by the type A derivatives máajka and (k)ceérká.

A limited number of On nouns show the extension /-en-/ in cases other than NAsg. NA íme G ímena "name". A large number of nouns (many but by no means all denoting the young of people and animals), plus many deminutives with the suffix -č- and a good contingent of loans from Turkish, as well as a number of masculine names, extend the stem by /-et-/ in singular non-NA forms and must be accounted a productive category.[14] The masculine names are masculine in gender and do not usually occur in the plural, while the others are neuter in gender and are mostly in mixed category forming their plural with the suffix -aad- (see 1.4 below); those which are of On type in

singular and plural (e.g. kanábé "couch") have the suffix in the plural as well. The On noun jaájé "egg" has the /-et-/ extension only in the singular non-NA forms (Npl. jaájá), as do the eastern variant úvo (=úho) "ear" and the mixed noun deété (dijété) "child". The noun dȯrvo has the extension /-et-/ only in the singular non-NA in the meaning "wood, lumber", but in all non-NAsg. forms in the meaning "tree". Likewise the noun stákló has /-et-/ in the singular non-NA only in meaning "small bottle", but not in its principal meaning "glass". Examples:

Nsg.	Gsg.	Npl.
mfile (man's name)	mfileta	--
pfle "chicken"	pfleta	(pflaad)
kanábé "couch"	kanábéta	kanábéta
jaájé "egg"	jájéta	(jaájá)
úvo "ear"	úveta	úši
deété (dijété) "child"	dététa (djététa)	(décá, djécá)
dȯrvo "tree, wood"	dȯrveta	dȯrvétá "trees"
		(dȯrva) "wood, lumber"

Four On nouns have the extension /-es-/ in the plural: nébo "sky, heaven"; čúdo "wonder, marvelous thing" has the extension in the alternate plural form with the meaning "miracles", télo "body" has it in the alternate plural meaning "heavenly or dead bodies", kólo "wheel" has it in the meaning "large wheels". Thus, nébo, nebéssá, etc. One mixed noun, type On in sg., type C in pl., has the extension /-er-/ in non-NAsg. forms: véčee "evening", G véčera (This word is used primarily in the east; in the west this noun has the stem večeer- in all forms and is declined as type C, except only in the common greeting dóbar véčeer "good evening" where it is type Om).

The majority of monosyllabic Om nouns as well as a few polysyllabic Om stems extend their stems with the suffix -ov-~-ev- (/-ev-/ occurring after palatal consonants). Addition of this extension is a productive pattern, as it

is added to recent borrowings.[15]

Nsg. drúg	Npl. drúgovi	comrade, pal
góluub	gólugovi	dove, pigeon
bȉč	bȉčevi	whip

Most Om nouns with the suffix -in- retain it only in the singular, dropping it in the plural. The stem turk- "Turk" also shows stem-final J-change before -in- and regular l-change in the plural.

Nsg. búgarin	Npl. búgari		Bulgarian
grádȁanin	grádȁani		citizen
tȕrčȉn	tȕrci	Gpl. tȕraakaa	Turk
but: domáćȉn	domáćȉni		host, head of house

1.4 Mixed nouns.

Serbo-Croatian has a number of groups of nouns as well as a few isolated nouns which are of mixed genders or declensional types.

Type Am: This type, which has the forms of type A and is masculine in singular and feminine in plural, has been mentioned above (1.2): vládȉka "(Orthodox) bishop" etc.

Type Om/n: A fairly extensive (and productive) subclass is composed of recent borrowings which are declined as type O (with the ending -o in VNAsg.) and are of masculine gender in the singular and neuter in the plural. Such are dȉnámo "dynamo", torpédȏ "torpedo", etc. (Npl. dȉnáma, torpédá, etc.).[16]

In addition three Om nouns ákt "act, file, nude portrait" dokúmenat "document", and fákat "fact" have besides their regular plurals, alternate On (Npl. ending -a, neuter gender) plurals. In the case of ákt there is a semantic differentiation of the plural forms: ákti, "acts", áktovi "nudes", áka "files".

Type A/O: consists principally of formations with the suffixes -at- and -ist-. Though some speakers decline these as straight type O or Am nouns, for many

speakers they have masculine gender in both singular and plural, but Type A forms in the singular.

Nsg. komúnísta Npl. komúnísti communist

Type O/C: Most nouns with the stem extension /-et-/ (including all such nouns referring to animate beings) do not retain this extension in the plural, but (excepting deétè~dijéte "child"; see below) replace it by -aad-. The forms with -aad- have type C endings: NA have the type Csg. ending ∅, while GDI have (in idiolectal variation) either the Cpl. endings G -ii, DI -ima (archaic -ma) or Csg. GDL -i. The forms in -aad- which serve as the semantic plural counterpart to the singular forms in /-et-/ have, as far as they have type C singular forms, feminine singular attribute and complement agreement, but plural verbal agreement; the forms with type C plural endings have feminine plural agreement; pronoun replacement with both types of ending may be either feminine singular or (in the case of living beings) masculine plural (cf. the similar case of bráća, etc.). One noun of this type čeljadé "human being" has the suffix -aad- in the singular (before /-et-/) as well as in plural.

Examples:

Nsg.	Gsg.	NApl.	Gpl.	DIpl.
télé	téléta	télaad	télaadii	télaadima ∽
			∽ télaadi	telaádmá calf
siróčé	siróčéta	síročaad	síročaadii	síročaadima ∽
			∽ síročaadi	siročaádmá orphan
únúče	únúčeta	únúčaad	únúčaadii	únúčaadima ∽
			∽ únúčaadi	unučaádmá grandchild
čeljadé	čeljadéta	čéljaad	čéljadii	čéljaadima ∽
			∽ čéljadi	čeljaádmá human being

As mentioned above (1.3.3) the noun véčee "evening" has the stem extension /-er-/ in non-NAsg. forms, with On endings and neuter gender in the singular and type C endings and feminine gender in the plural. In the west, this noun is regular class C (NAsg. večeer, Gsg. večeri) in all forms. Likewise, óko "eye", úho "ear" are type On in the singular; their plural forms óči, úši are class C (and feminine).

O/A nouns: Four nouns are type O in singular and have type A singular endings in the forms which serve as their plural. These "plural" forms have feminine singular attribute and complement agreement, but plural verbal agreement; pronoun replacement is feminine singular (~m.pl.). In the singular one noun (deéte) is neuter and has the stem extension /-et-/ in all singular non-NA forms; the other three are masculine (brát, gospódín, vlastélín); two have the suffix -in-, dropped in the plural; deété and brát change the stem-final consonant in the plural.

Nsg. deété (dijété)	Npl. décá (djécá)	child
brát	bráća	brother
gospódín	gospódá	gentleman, Mr., Sir
vlastélín	vlastélá	nobleman (archaic)

Illustration of gender/number agreement of plural of O/C and O/A nouns:

Táa mládaa prásaad su dóbrá.	Those young pigs are good.
Náša bráća su dóbrá.	Our brothers are good.
Óná (~ónf) su dóbrá.	They (with reference to either of the foregoing sentences) are good.

1.5 Example paradigms.

	A-nouns			Am-nouns	
sg.					
	"hand"	"side"	"needle"	(name)	"servant"
V	rúuko	stráano	íglo	fívo/fíve	slúugo
N	ruúká	straáná	íglá	ifvó/ifvé	sluúgá

A	rúuku	stráanu	íglu	íívú	sluúgú
G	ruúkée	straánée	íglée	íívée	sluúgée
D	ruúcí	straánî	íglî	íívî	sluúgí∽sluúzî
I	ruúkóom	straánóom	íglóom	íívóom	sluúgóom

pl.

NA	rúuke	stráane	ígle	slúuge
G	ruúkáa∽rúkúu	straánáa	igaáláa	sluúgáa∽slúgúu
DI	rúkáma	stránáma	ígláma	slúgáma

Om-nouns

sg.

	"city"	"husband"	"horse"	"business"	"thinker"
V	gráade	múužu	kónju	pósle	mîslioče
N	gráad	múuž	kónj	pósáo	mîslilac
A		múuža	kónjá		mîslioca
G	gráada			póslá	
D	gráadu	múužu	kónjú	póslú	mîsliocu
I	gráadom	múužem	kónjém	póslóm	mîsliocem

pl.

N	grádovi	múževi	kónjî	póslóvi	mîslioci
A	grádove	múževe	kónjé	póslóve	mîslioce
G	gradoóvâa	mužeévâa	koónjâa	póslóovaa	mîslilaacaa
DI	grádovima	múževima	kónjîma ∽ kónjmá	póslóvima	mîsliocima

In the above table I have accented the genitive plural of gráad and múuž according to the normative handbooks; in fact however my principal informant show no shift of stress in this form but retains single (falling) stress on the initial syllable, a pattern widespread among urban standard speakers for nouns of this type.

Om-nouns with extension /-in-/

sg.		
	"citizen"	
V	grâđanine	
N	grâđanin	
A, G	grâđanina	
D	grâđaninu	
I	grâđaninom	
pl.		
N	grâđaani	
A	grâđaane	
G	grâđaanaa	
DI	grâđaanima	

Om-nouns with /o~e/ in VNsg.

sg.		
VN	máarko	mfloje
A, C	máarka	mfloja
D	máarku	mfloju
I	máarkom	mflojem
pl.		
N	máarci	mfloji
A, G	máarkaa	mfloojaa
DI	máarcima	mflojima

Om/n noun

sg.	"torpedo"
VNA	torpeédó
G	torpeédá
D	torpeédú
I	torpeédóm
pl.	
NA	torpeédá
G	torpeédáa
DI	torpeédíma

On-nouns

sg.	"village"	"field"	"oar"
VNA	séló	pólje	véslό
G	sélá	pólja	véslá
D	sélú	pólju	véslú
I	sélóm	póljem	véslóm
pl.			
NA	séla	póljá	véslá
G	séelaa	poóljáa	vesaálíáa
DI	sélima	póljíma	véslíma

On-noun with extension /-en-/

sg.	"name"
VNA	íme

OC-noun with extensions /-et-/, /-aad-/

sg.	"calf"
NA	télé

C-noun

sg.	"thing"	"joy"
NA	stváar	rádoost
VGD	stváari	rádosti

G	fmena	téléta	I	stváarju	rádošću
D	fmenu	télétu		∽ stváari	∽ rádosti
I	fmenom	télétom	pl.		
pl.			NA	stváari	rádosti
NA	iméná	télaad	G	stvaárfi	rádoostii
G	imeénáa	télaadi∽téladii	DI	stvaárfma	rádostima
DI	iménfma	télaadi∽télaadima			
		∽telaádmá			

1.6 Defective nouns.

Some nouns occur only in the singular (singularia tantum).

Most personal names and geographical names have no plural forms. For many speakers, especially in the east, the Om nouns áuto and ráadijo and the On noun kfló have in the plural only the Gpl. and that only after numerals. (Elsewhere, where plural meaning would be required, the synonyms automóbfl, ráadijo-apáráat, and kflogram are used).

A fairly large number of words occur only in the plural (pluralia tantum). These include geographical names such as úžice (literally "the narrows"), káarlocvci [illegible] common nouns like vraátá On "door" mákáze A "scissors".

1.7 Indeclinable nouns.

The word dóba "age, period, time" has no inflection for many speakers of Serbo-Croatian, but must be classified as a noun because it fills only those syntactic frames characteristic of nouns. In syntactic congruence it is neuter singular and inflected adjectives accompanying it are always NA even in frames requiring other cases.

Examples:

U tóo dóba su se Sloveéní presélíli na Bálkáan.
In that period the Slavs migrated to the Balkans.

U stáaroo dóba nékii su bílí róbóvi.
In ancient times some were slaves.

Alternatively, dóba may be declined as an On noun with the irregular ending -a in NA sg. (see 1.1).

Other indeclinables include borrowed feminine names terminating in consonant (kármen "Carmen", nfves "Nives"), though these may alternatively be declined as A nouns (1.1), and family names of women (o zórí pópović "about Zora Popović").

2.0 Numerals.

The numerals constitute a special class of nominals, uninflected, except vestigially, as described below.

The numerals are:

2. m.n. dváa f. dvée (dvíje)
3. trfi
4. čétíri
5. péet
6. šeest
7. sédam
8. ósam
9. déveet
10. déseet
11. jedánáest
12. dvaánáest
13. trínáest
14. četírnáest
15. pétnáest
16. šésnáest
17. sedámnáest
18. osámnáest
19. devétnáest
20. dvaádéseet
30. trídéseet
40. četírdéséet
50. pedéséet
60. šezdéséet
70. sedamdéséet
80. osamdéséet
90. devedéséet
100. stóo

and compounds of which the foregoing form the last element, plus m.n. óba f. óbe (óbje) "both".

The following are not grammatically numerals: jéd[á]n "one" (and its compounds) is an adjective and stótina "100", (h)fljáda "1000" tísuća "thousand" (used principally in Croatia), milíjun (Croatian) or milíjón (Serbian) "million", milíjarda "billion" are nouns, with a full array of inflected forms appropriate to their classes.

In normal colloquial speech numerals have contracted allologs. Thus, jedánaest~jedánajst or jedánaajs (and all other numerals ending in -aest have allologs in -aajs(t). dvaádéseet~dváajs(t), trifdéseet~tríjés(t), četardéséet~čet(ȩ)rés(t), šezdéséet~šeésé(e)t.

The numerals dvéa, trfi, čétfri and óba have inflected forms, which are however not current in colloquial spoken language, except when they function either alone without accompanying nouns or else in conjunction with pronouns, e.g. váma dvémá "to you two". In other usages, dvéa, trfi, čétfri function, as do the other numerals, namely as undeclined nominals: úzéo sam nóvác od dvéa drúga. "I took the money from two friends." The declined forms of these three numerals, as given by the grammars, are:

	2		3
	m.n.	f.	
NA	dvéa	dvée (dvíje)	trfi
G	dvaájdu	dveéjdu (dvifjdu)	trifjdu
DI	dvaámá ~ dvámá	dveémá (dvjeémá ~ dvémá ~ dvjémá)	trifmá

	"both"		4
NA	óba	óbe (óbje)	čétíri
G	obaájju	obeéjdu (obiíjdu)	četfrríjuu
DI	obeémá	(objeémá ~ objémá ~ óbjema)	čétírma

The forms in parentheses above are the respective ijekavski variants. In the usage of many, dveémá (or one of its variants) replaces dvaámá in the m. n. DI.

2.1 Collective numerals.

The collective numerals dvóje "two", tróje "three" in the spoken language function as indeclinable nouns and may be accompanied by nouns (usually those nouns which have a formally singular collective as plural, like télaad "calves") in the genitive (plural if the noun has a plural form). Their forms are dvóje "two", tróje "three" čétvoro ~ čétvero "four" (collective numerals higher than four are formed by adding the suffixes -or-o ~ -er-o to the cardinal numerals, e.g. pétoro "five," sédmoro "seven," ósmoro "eight"; dvóje and tróje are formed on the stems dvoj-, troj- with the neuter noun edning -e.

While the colloquial language treats these as indeclinables, the grammatical handbooks give a full array of forms, with numerous variants, as follows.

	2	3	4
NA	dvóje	tróje	čétvoro ~ čétvero
G	dvoógá ~ dvójega	troógá ~ trójega	četvoórógа ~ četvoórgá ~ četveérgá
D	dvoómé ~ dvójemu ~ dvoómá	troómé ~ trójemu ~ troómá	četvoroómé ~ četveroómé ~ četvoórmá ~ četveérmá
I	dvoómá	troómá	četvoórmá ~ četveérmá

With pluralia tantum and with items which come in sets or pairs, collective numerical adjectives are used, declined in all the respective plural case forms (indefinite endings) on the same stems as the indeclinable collectives; thus dvóji, dvóje, dvója, dvójiih, dvójiima; četvori, sédmori, etc.

póprávak trójiih kóolaa	the repair of three cars
četvore čárápe	four (pairs of) stockings

3.0 Pronouns.

3.1 Personal pronouns.

Enclitic forms are given in parentheses, alongside the respective full form.

sg. person

	1.	2.	reflexive
N	jáa	tfi	--
AG	méné (me)	tébé (te)	sébé (se)
D	ménĭ (mi)	tébĭ (ti)	sébĭ (si)
I	mnóom ~ mnoómé	tóboom	sóboom

pl. person

	1	2
N	mfi	vfi
AG	náas (nas)	váas (vas)
DI	náma (nam)	váma (vam)

The enclitic form si, though in colloquial use in the western part of the Serbo-Croatian speech area and though used by older Croatian writers, is no longer recognized as standard by the normative grammars. The 1sg. variant mnoóme, listed in some handbooks, is rejected as unacceptable by my principal informant.

Enclitic forms are not used after prepositions, except in archaic language, where they occur exclusively in accusative function, the (last) vowel of the preposition being lengthened and the (first) vowel receiving single (falling) stress: náa me (equals na méné) "upon me", úzaa me "alongside me".

third person pronouns

sg.	m.	n.	f.	pl. m.	n.	f.
N	ón	ónó	óná	ónî	óná	óné
A, G	njégá (gavnj)		njdu (jevju) njée (je)	njîh (ih)		
D	njémú (mu)		njóoj (joj)	njîma (im)		
I	njîmvnjiîmé		njóomvnjoómé			

Stevanović (1964, 310) states that AGD of the singular pronouns (all three persons) have alternate forms with single rather than geminate stress (i.e. méne, tébe, njéga, etc.).

The enclitic alternate nj is used only for masculine accusative after preposition in archaic language: záa nj "after him", prédaa nj "before him". The enclitic ju is used in formal language to replace accusative je, when it would otherwise appear in sequence with the enclitic verb for je "is"; colloquial language avoids this by using the full form njuu. The stem of the third personal pronouns is on- in the nominative (with lengthening of stem before the ∅) and /nj-/ in the remaining cases.

3.2 Interrogative pronouns.

	(animate)	(inanimate)
N	kóvtkó	štóvštá
A, G	kógá	čégá
D	kómévkómú	čémú
I	kîmvkîmé	čîmvčîmé

For some speakers, alternate short dative forms kóm, čém, used only in conjunction with prepositions, exist.

The form štó is used as a clause introducer (štó je óon pámetan "Boy, is he smart!") and as an indeclinable relative (žéná štó si joj dáo knjígu "the woman to whom you gave the book") in all standard speech varieties. In questions, including indirect questions, šta is used in eastern varieties and is not unknown in western standard speech, though štó is perhaps predominant there; tkó is a Croatian formal variant of the animate pronoun, now little used in actual speech.[17]

The animate pronoun has the stem /k-/, the inanimate /č-/ (~/št-/ in NA, but cf. dialectal čá for štó). Note that the non-nominative forms of the third person and interrogative pronouns have the special short adjective endings (4.2) as well as facultative addition of /e/ in Isg.

In the nominative, on- has the indefinite adjective endings, while the interrogatives have the special ending -o (~ -a).

4.0 The Adjective.

The Serbo-Croatian adjective distinguishes the following form categories: case, number and gender. The distinctive case forms are five: nominative, accusative, genitive, dative, and instrumental. Vocative is identical with nominative. The numbers are singular (sg.) and plural (pl.) and the genders masculine (m), neuter (n) and feminine (f). These categories intersect so that every adjective has forms for each case in each of the three genders in both numbers. But note that the forms are not necessarily separate phonemic shapes. We will see below that different cases or different genders may share forms of identical phonemic shape.

Many adjectives also distinguish a category of definite vs. indefinite. This distinction is gradually breaking down in the standard colloquial speech, so that there is considerable confusion and interchangeability in the use of definite and indefinite forms.

The indefinite form is required in predicative function, while in attributive usage, the definite is, according to the normative grammars, required in conjunction with the deictics (t- "that" etc.) and almost always in the vocative; otherwise in attributive function occurrence of definite or indefinite is governed by semantic factors (the definite having a meaning somewhat like that of the definite article in those languages which possess it). In actual practice, there seems to be a considerable amount of free variation with no very clear distinction of the two forms in attributive functions. Definite and indefinite are distinguished (1) by the shape of the ending in the NA only, the definite in all but one case being a long vowel, the indefinite being the corresponding short vowel; and (2) by stress in some (not all) adjectives, the definite forms of such adjectives (all cases) having stress shifted one syllable forward from its position in the indefinite (see below). The facts that in many or most varieties of standard Serbo-Croatian stress and length contrasts undergo widespread neutralizations in items not under primary stress and that attributes usually do not receive primary stress have doubtless contributed to the above mentioned breakdown and confusion of the definite/indefinite contrast. Because of the lack of a thorough and widespread survey as to what standard colloquial usage in this respect actually is, the definite/indefinite forms are here given as in the (mostly normative and archaizing) handbooks, except where those are blatantly at odds with

overwhelming spoken usage (i.e. regarding the short noun-like indefinite endings of the GD sg.m.n. mentioned below).

Not all adjectives show both definite and indefinite forms. Among those that have only definite forms are all comparative/superlative forms (jáčii "stronger"), forms with certain suffixes, as -sk- (fráncúskii "French"), -j- (pásjii "of a dog") plus quite a number of others (máalii "little", désnfi "right", etc.), as well as certain "pronominal" adjectives (the deictics t- "that" on- "that over there", ov- "this" plus kójfi "which", číjfi "whose"). Those having only indefinite forms include possessive adjectives, both personal possessive adjectives(móoj "my", njégóv "his") as well as those formed by adding the suffixes -ov- or -in- to noun stems (brátov "brother's", séstrfn "sister's") and certain others, as sav "all" and those with the suffix complex -ak-[a]v- (kákáv "what kind").

4.1 Every adjective form consists of a stem plus an ending.

The stem of an adjective consists of one or more syllables, or, in the case of a small number of adjectives, is non-syllabic, consisting of a consonant or sequence of consonants. All adjective stems terminate in consonant.

stems					
plaav-	"blue, blond"	Nsg.m.	pláav	Nsg.f.	plaává
s[a]v-	"all"		sáv		svá

Endings may have the following phonemic shapes: zero (one variant of one ending; the Nm.sg. indefinite), single or geminate vowel, single or geminate vowel plus consonant, or vowel (single or geminate) plus consonant plus a usually optional single vowel. Three endings which begin with /o/ (n.Nsg., m.n.Gsg., m.n.Dsg.) show the morphophonemic alternation /o~e/

(/e/ after palatal consonant, /o/ elsewhere).

4.2 Basic adjective endings:

definite

sg.	masculine	neuter	feminine
N	-ii	-oo/-ee	-aa
A	∽		-uu
G	-oog(a) / -eeg(a)		-ee
D	-oom(e)∽-oomu/-eemu		-ooj
I	-iim		-oom

numerative m.n. Gsg. -a

pl.	masculine	feminine	neuter
N	-ii	-ee	-aa
A	-ee		
G		-iih	
DI		iim(a)	

indefinite endings

sg.	masculine	neuter	feminine
N	-∅	-o/-e	-a
A	∽		-u

pl.	masculine	feminine	neuter
N	-i	-e	-a
A	-e		

In the table above, the sign ∽ in m.Asg. means the ending is identical with Nsg. when modifying inanimate nouns and with Gsg. when modifying animate nouns, otherwise it separates forms in free variation (in m.n. Dsg.). The slant line (/) separates variants showing the /e∽o/ alternation, while parentheses enclose optional final vowels (vowels alternating freely with null).

A special numerative ("dual") form of the Gsg. m.n. (ending -a) obligatorily occurs when the adjective appears in a noun phrase headed by the numerals dváa "two", trfi "three", čétfri "four" or a compound numeral terminated by one of them. Note that this cannot be said to be an indefinite form, since it occurs in all adjectives, including those which do not show indefinite forms: dváa makédóonska junaáka "two Macedonian heroes".

Indefinite endings occur in the nominative and accusative singular and plural. Except for the masculine (definite -ii, indefinite -ø), the indefinite ending is identical with the definite ending but with shortened vowel. The deictic adjectives on the stems ov-, on-, t- have a special definite ending -aaj in the nominative singular masculine.

For the genitive and dative singular masculine and neuter, normative grammars list short noun-like endings G -a, D -u for the indefinite. These are however essentially dead in the colloquial spoken standard, though, to be sure, still frequently encountered in writing. Otherwise, in all cases excepting NA singular and plural, definite and indefinite forms are not differentiated by ending (but may be differentiated by stress; see below).

Facultatively bisyllabic endings (listed above with the facultative vowel of the second syllable in parentheses), namely GDsg. m. and n. and DIpl. m.f.n. occur in their longer or shorter forms in more or less free variation depending on various factors as style, tempo, "euphony", etc. The longer forms tend to occur when the adjective is first in a string of adjectives with the same ending or when the adjective occurs alone without a noun phrase head. In the Ipl. the longer form is required when the adjective (occurring alone) might otherwise be confused with the Isg. Thus, s náajboljiima "with the best (ones)" requires final /a/ to avoid confusion with s náajboljiim "with

the best (one)". The forms with final -u in the D. sg. m. n. are used less frequently (and idiolectically) than those with final -e when the initial vowel is /o/, but are required if the initial vowel is /e/.

4.2.1 Short ending forms of the GDsg. m. n. used in pronominal adjectives. The following adjective endings with shortened initial vowel occur in certain deictic, possessive, and other pronominal adjectives; stems t- "that", on- "that over there", ov- "this", moj- "my", tvoj- "thy", svoj "own", naš- "our", vaš "your", koj- "which, that", čij- "whose, s[a]v- "all", and saam- "self":[18]

G - og(a)/-eg(a)
D - om(e)~-om(u)/-em(u)

The forms with initial /e/ occur after "soft" stems (namely, those ending in /j/, /s/ and also s[a]v-). The distribution of mono- and bisyllabic variants is governed by the same factors as in other adjectives. In the Gpl. sv- has in addition to -iih the variant -ijuu, while the deictics t-, ov-, on- have (cf. some of the pronouns) facultative ending final /e/ in m. n. Isg. However, this /e/ is infrequent and occurs mainly when the deictic is itself a phrase head.

Stems ending in /oj/ (moj-, tvoj-, svoj-, koj-) have variant, contracted forms with these endings, whereby /j/ is lost and the endings with initial /e/ are consequently replaced by endings with initial /o/: /moj-ega/→ /mo-oga/; the resultant double vowel is, of course, the traditional long vowel, as in N sg. /sol-ø/ "salt"→/sóo/. In addition to loss of /j/, there is a change of stress as well, so that we have the alternate forms (the contracted forms being more frequent):

G mójég(a)~móog(a)	kójéga~kóoga
D mójému~móomu, móome	kójému~kóomu, kóome

4.3 Morphophonemic changes affecting the adjective stem.

(1) Stems ending in /l/ change /l/ to /o/ before a zero ending (see 0.4g):

Nsg. f. indef.	vésela		Nsg. m. indef.	véseo	gay
	zlá			záo	evil

For some speakers, certain stems, e.g. the stems topal- "warm", gol- "naked", do not folow this rule; thus, tópal rather than tópao (Nm.sg. indefinite).

(2) Inserted /a/ between the last two consonants of the stem occurs before zero ending in many adjectives (0.4h):

Nsg. f. indef.	svá		Nsg. m. indef.	sáv	all
	zlá			záo	evil
	kraátká			kraáták	short
but cf.	prósta			prós	simple, crude

(3) Voicing assimilation:

stem: niz[a]k-	Nsg. m. indef.	nízak	Nsg. f. indef.	níska	low
teež[a]k-		teéžak		teéška	heavy

This of course is an automatic change (0.4a).

(4) Loss of dental stop between /s z/ and /n/ (0.4f), cf. čast[a]n- "honorable", Nsg. indef. m. částan, f. čásna.

4.4 Alternation of vowel length.

(a) Before /o/ resulting from the change /l→o/, long (geminate) vowel is shortened (cf. 0.4d). Also operative in the verb system, this change affects one adjective stem: Nsg. indef. f. beélá (bijélá) vs. m. béo (bío) "white". With a preceding single /o/ of course, the /o/ from /l/ constitutes a geminate (long) vowel, thus gol- "naked" Nsg. indef. f. góla vs. m. [illegible]o.

(b) In the following adjectives the root contains a long vowel before zero

ending, short vowel elsewhere:

Nsg. f. mójá	Nsg. m. móoj	my
tvója	tvóoj	your
svójá	svóoj	one's own
bósá	bóos	barefoot

(c) The stem star- "old" lengthens the root vowel in the definite forms: Nsg. f. stára or stárá vs. stáaraa. Some speakers have this pattern in other adjectives as well: zdráva vs. zdráavaa, práva vs. práavaa.

4.5 Stress alternations.

(1) Before the zero ending of Nsg. m. indefinite, shift one syllable toward beginning of word occurs automatically where the second half of geminate stress falls on the ending:

f. žudtá	vs. m. žđut		yellow
visóká		vísók	high
zeléná		zélén	green

This shift also occurs in a large number (but not all) items in which the second half of geminate stress would fall on inserted /a/; the determining factor here seems to be that inserted /a/ precedes /r/ or /l/:

dóbrá vs. dóbar	good
náágla vs. náagao	precipitous
svećtlá (svijétlá) vs. svćetao (svíjetao)	bright
podmuúklá (or pódmuukla) vs. pódmúukao	treacherous

There is no other intraparadigmatic alternation within the indefinite forms.

(2) Alternations between the indefinite and definite stems. Where such alternation occurs, the definite stem shows the shift one syllable toward the beginning of the word. There is no intraparadigmatic alternation within the

forms on the definite stem. Examples (N. sg. f. indefinite vs. definite).

blaágá	vs.	bláagaa	mild
čeéstá		čéestaa	frequent
grúdbá		grúdubaa	crude, rough
krífvá		krfívaa	crooked, wrong
gólá		gólaa	naked
dóbrá		dóbraa	good
zeléná		zélénaa	green
dubóká		dúbókaa	deep

4.6 Indeclinable adjectives.

Certain uninflected elements must be classed as adjectives, because they occur only in syntactic frames characteristic of adjectives. Unlike other adjectives, these may have stems ending in a vowel.

Dáaj mu málo taázé	Give him a little
svínjskóog méesa.	fresh pork.
Tóo je taázé méeso.	That's fresh meat.
Kupío sam portaábél	I bought a portable
písáćuu mašínú.	typewriter.

There is a fair number of such uninflected adjectives and all of them are loans from foreign, non-Slavic languages (principally Turkish and German). The degree of acceptability to speakers varies. Many educated speakers recognize them as foreign borrowings and would avoid them in written or formal oral communication.

4.7 Example paradigms.

In the examples below the definite forms are given in all cases, as are the indefinite forms for the NA; indefinite forms for the remaining cases have the same endings as the definite, but retain the accent of the definite stem. The numerative genitive variant of the masculine and neuter singular -a.

which occurs in all adjectives, is not listed in the example paradigms below.

definite stem: zélén-
indefinite stem: zelén-
"green"

	sg.	masculine	neuter	feminine
def.	N	zélénii	zélénoo	zélénaa
	A	~		zélénuu
	G		zélénoog(a)	zélénee
	D		zélénoom(e~u)	zélénooj
	I		zéléniim	zélénoom
indef.	N	zélén	zelénó	zeléná
	A	~		zelénú

	pl.	masculine	feminine	neuter
def.	N	zélénii	zélénee	zélénaa
	A	zélénee		
	G		zéléniih	
	DI		zéléniim(a)	
indef.	N	zelénf	zeléné	zeléná
	A	zeléné		

definite stem: vrúć-
indefinite stem: vrúć-
"hot"

	sg.	masculine	neuter	feminine
def.	N	vrúćii	vrúćee	vrúćaa
	A	~		vrúćuu
	G		vrúćeeg(a)	vrúćee
	D		vrúćeem(u)	vrúćooj
	I		vrúćiim	vrúćoom
indef.	N	vrúć	vrúćé	vrúćá
	A	~		vrúćú

	pl.	masculine	feminine	neuter
def.	N	vrúćii	vrúćee	vrúćaa
	A	vrúćee		
	G		vrúćiih	
	DI		vrúćiim(a)	
indef.	N	vrúćí	vrúćé	vrúćá
	A	vrúćé		

t- "that" (on- "that over there" ov- "this" have same inflection)

sg.	masculine	neuter	feminine
N	táaj	tóo	táa
A	⌣		túu
G		tòg(a)	tée
D		tóm(e⌣u)	tóoj
I		tfim⌣tiímé	tóom

pl.	masculine	feminine	neuter
N	tfi	tée	táa
A	tée		
G		tfih	
DI		tfim(a)	

moj- "my" (tvoj- "thy", svoj- "one's own", have the same inflection)

sg.	masculine	neuter	feminine
N	móoj	mójé	mójá
A	⌣		mójú
G		mójég(a)⌣móog(a)	mójée
D		mójém(u)⌣móom(e⌣u)	mójóoj
I		mójfim	mójóom

pl.	masculine	feminine	neuter
N	mójf	mójé	mójá
A	mójé		
G		mójfh	
DI		mójfim(a)	

naš- "our" (vaš- "your" has the same inflection)

sg.	masculine	neuter	feminine
N	náš	náše	náša
A	⌣		nášu
G		nášeg(a)	nášee
D		nášem(u)	nášooj
I		nášiim	nášoom

pl.	masculine	feminine	neuter
N	náši	náše	náša
A	náše		
G		nášiih	
DI		nášiim(a)	

čij- "whose"

sg.	masculine	neuter	feminine
N	čŕjĭi	čŕjée	čŕjáa
A	⌣		čŕjúu
G		čŕjég(a)	čŕjée
D		čŕjém(u)	čŕjóoj
I		čŕjĭim	čŕjóom

pl.	masculine	feminine	neuter
N	čŕjĭi	čŕjée	čŕjáa
A	čŕjée		
G		čŕjĭih	
DI		čŕjĭim(a)	

koj- "which"

sg.	masculine	neuter	feminine
N	kójĭi	kójée	kójáa
A	⌣		kójúu
G		kójég(a)~kóog(a)	kójée
D		kójém(u)~kóom(u⌣e)	kójóoj
I		kójĭim	kójóom

pl.	masculine	feminine	neuter
N	kójĭi	kójée	kójáa
A	kójée		
G		kójĭih	
DI		kójĭim(a)	

s[a]v- "all"

sg.	masculine	neuter	feminine
N	sáv	své	svá
A	~		svú
G	svégá		svée
D	svémú		svóoj
I	svím		svóom

pl.	masculine	feminine	neuter
N	svĺ	své	svá
A	své		
G	svíh~svíjdu		
DI	svíim~sviímá		

NOTES

1. This article and my four previous papers on the grammatical structure of contemporary standard Serbo-Croatian (see Bidwell 1959, 1964, 1965, and 1969c) taken together constitute a structural sketch of Serbo-Croatian.

2. Here I also want to express my thanks to Professors Pavle and Milka Ivić who generously supplied me with offprints of very many of their articles, the reading of which provided many valuable and fruitful stimuli, even though I have not always agreed with their formulations.

3. It is interesting that Serbs from the western part of Yugoslavia, who are often native speakers of dialects which in prosodic and other features are closer to the prescribed norm, based on Vuk and Daničić, than is the speech of the capital, will, upon migrating to Belgrade, consciously or unconsciously, almost invariably hasten to adapt their speech to the urban koiné ("incorrect" though certain features of the latter may be, in the normativist view).

4. The ekavski standard is used by Serbs from Serbia (including Kosovo and the Vojvodina), while the ijekavski standard is used by all Croats, most Montenegrins and many Serbs from Bosnia-Hercegovina and Croatia. Though ekavski is roughly the eastern variety and ijekavski the western, the use of one or the other standard does not necessarily always reflect the underlying dialect. Thus some Serbs from ijekavski regions use the ekavski standard and those Croats who concurrently speak an ekavski or ikavski (jat reflected by /i/) dialect, nonetheless use the ijekavski standard. Crosscutting the e/ije dichotomy are a number of regional colloquial standards (as distinct from local dialects) distinguished manily by lexicon. Thus a standard speaker from Sarajevo (Bosnia) may share ijekavski speech with a Zagreb speaker, but be closer in terms of vocabulary selection to a Belgrade speaker.

5. It appears likely that in addition to the traditional inventory of phonemes, we must also posit a voiced counterpart of /c/ which appears (1) as a result of voicing assimilation of word-final /c/ to a following initial voiced consonant (/ótaʒgóvorii/ "father is speaking") and (2) in words with a prefix ending in /d/ followed by a /z/; thus rapid /naʒór/ "supervision" (spelled nadzor) vs. deliberate /naád=zór/ vs. /naʒór/ "opinion". We will write [ʒ] as /dz/ parallel to our use of digraphs for certain other phonemes.

6. Note that the analysis of long vowels as geminates requires that we posit an internal juncture in certain prefixed verbs, e.g. po=ohólīti se "become arrogant", in certain compounds, e.g. plavó=ók "blue-eyed", samo=ódbrana "self-defense", within certain loanwords, e.g. zo=ólóškii "zoological" and between (borrowed) stems ending in vowels and certain case endings, e.g. Isg. bó=oom "boa", rešó=om "hotplate", Gsg. bilbá=á "Bilbao", ragú=ú "ragout", Apl. ataše=é "attaché". This juncture is also required to account for the non-application of palatal assimilation (rule b) in items like s=njīm "with him" (but note non-standard šnjīm with no juncture), and for items like in=jékcīja "injection" and kon=junktuúrá, "boom", where /n/ plus /j/ is not [n'](phonetic [n]is analysed as a biphonemic sequence /nj/, so too [l'] is /lj/). In rapid speech (really normal colloquial speed) many of these

junctures are deleted, so that we have items like zoólóškii (normal "long" vowel), plavóok, and óonje (with [n']) "he is". I symbolize this juncture with /=/, preferring to retain hyphen(-) and plus (+) for other uses.
In ijekavski speech the disyllabic sequence /ije/ counts morphophonemically as a long vowel; its short counterpart is /je/. Thus, in the comparative, where the vowel of a syllable preceding the comparative suffix is regularly shortened (Bidwell, 1959),we have, corresponding to ekavski léep "pretty", lépši "prettier", líjep and ljépši.

7. Rule (b) is automatic only in ekavski speech; in standard ijekavski speech the sequences /s/ or /z/ plus /l/ or /n/ followed by the short reflex of jat' /je/ are exempt from this rule; thus ijekavski snjéžan "snowy", sljéme "crest (of hill)". However, in some non-standard ijekavski speech varieties these sequences too are subject to palatal assimilation, e.g. šnjéžan, etc.

8. For ijekavski speech an additional rule must be posited: /je/ corresponding to morphophonemically long /ije/ is replaced by /i/ before /o/ from /l→o/. Thus, we have bijélá vs. bío. The rule is not automatic, because of exceptions like sjéo "sat" (cf. sijéló "party" with /ije/).

9. In derivation and in verb morphology there is a special J-change of clusters with /s z/ in addition to that described here; /st sk→št/ zd zg→žd/. Thus, vos[a]k- "wax", vóštan "waxen", kȑstíti "christen" kȑšten "christened". These special changes do not apply in nominal morphology.

10. A three declension analysis was first proposed by Milija Stanić (1949) and the genitive singular as the criterion for differentiating the three declensions was originally proposed by Pavle Ivić (1959).
In two previous articles on Serbo-Croatian (Bidwell 1969a and 1969c) I designated the three declensions as A, B, C. I substitute the designation O for B to gain an additional mnemonic -- O nouns comprise mostly the traditional o-stems (as do A nouns the traditional a-steams) and many of them (particularly On nouns) have the ending -o in the nominative singular. Users of my above-cited articles should remember that B there equals O here; I have also used the A, O, C designation in my Outline of Slovenian Morphology (Bidwell, 1969b).

11. Traditional locative and dative are combined here in one case, D(ative), for these reasons: Standard speakers either make no accent difference between "locative" and "dative" or, if there is an accent shift, one accent position occurs when the dative is in non-prepositional use and another when dative occurs as object of a preposition; thus the two accent variants are in complementary distribution. The reason for this is that the only preposition in use with the traditional dative was k "toward", now dead in spoken usage (replaced by prema or other prepositions), while the "locative" occurred only as object of various prepositions.

12. Roots, derivational affixes, linking vowels, stem extensions, and inflectional endings are all assumed to possess the status of morphemes. Morphemes are not required to have a single denotative meaning. Thus, the only "meaning" of the linking morpheme -o- in lúkobraan "breakwater" is its grammatical function of linking two root morphemes. So too we regard the stem extension -ov-~\-ev- (as in drúg-ov-i "comrades") as a morpheme, whose only "meaning" is that it concomitantly (redundantly) signals plural. Further we do not regard an ending such as -a in žéná "woman, wife" as a portmanteau form subsuming the morphemes "nominative" and "singular". Rather we regard the exponents of these categories as grammatical sememes, both of which are signaled simultaneously by the single morpheme -a.

Endings which occur in the same case, but in different declensions we regard as separate morphemes (not allomorphs), because of minimal contrasts such as -∅ versus -a, both occurring in the nominative singular with the same or homophonous stems. So On kúum "godfather" vs. A kúmá "godmother", etc. On the other hand, we would regard such homophonous endings as -a Nsg. in A-nouns and Gsg. in O-nouns as separate morphemes identical in phonemic shape, because of their occurrence in distinct and diverse syntactic environments. Thus, we follow the methodology of classical structural descriptivism (as exemplified by Nida 1949 and Harris 1960) in the segmentation into morphemes. However, like the stratificationalists, we insist even more strongly than the classical Bloomfieldians on a strict separation of levels, e.g. between the morphemic (morpho-syntactic) and sememic (semantic).

13. In mo[a]k- "brain" plus two nouns of rare occurrence drooz[a]k- "thrush", briz[a]k- "jet, spray" voicing assimilation is progressive rather than regressive, so that cases with non-ϕ ending are on the stem mozg-: mózak, mózga; drozg-, dróozak, dróozga; brizg- brízak, brízga. These are the only cases of progressive assimilation; in all other occurrences, regressive voicing assimilation is automatic.
Generally, stems ending in /lj nj/ or clusters of sibilant /s z š ž/ plus stop or affricate (as in úústá Gpl. úústáa "mouth") as well as stems ending in single consonant show the ending -aa with no inserted vowel; stems in other clusters tend to have the ending -ii and no inserted vowel or the ending -aa with /aa/ inserted in the cluster; there are numerous exceptions and considerable free variation in some items.

14. In nouns with the extensions -et-, -en- I have chosen to analyse the final vowel of the NAsg. form as the ending -e rather than a truncated variant of the extension (which, of course, it was historically). My reasons for this analysis are several: The /e/ is phonemically identical with the ending -e of other Om nouns and the Sprachgefühl of natives seems to regard it as an ending; there is the parallelism with -o in čúdo, čudésá, which is clearly an ending and not a truncation of the extension #/-es-/; finally there are some derivatives which do not show the extension (deété "child, détínjast "childish"; jaájé "egg", jájáar "egg seller"). The item véčee "evening" is analysed as stem veče- plus ending -e; stem-final /e/ is deleted before extension /-er/ in the oblique cases.

15. Stevanović is in error when he states (1964, p. 207) that fónd "fund" is the only recent borrowing to add the stem extension /-ov-/, in fact it is very productive with borrowings: tím "team", (Npl. tímóvi) "team", džíp (Npl. džípovi) "jeep", méč (Npl. méčevi) "match (in sports)", krós (Npl. krósovi) "cross country race" etc.

16. For at least some speakers in the western part of the Serbo-Croatian area such nouns are declined as regular Om in plural (Npl. ending -i, cf. Brabec, p. 61); for such speakers these nouns are Om nouns of the same type as máarko "Mark" and the category Om/n is absent from their system.

17. Statements concerning the inflection of interrogative words such as kó, štó, kákáv "what kind", kójí "which" etc. are understood to apply also to their derivatives with such affixes as ni-, ne-, i-, and the like (néko "someone", níko "no one", íko "anyone", sváko "everyone"). Such derivatives of interrogatives are pronouns, adjectives, or adverbs in accord with the form-function class of their source interrogative. Note that in the derivatives of the inanimate interrogative pronoun we have néšto "something", but -šta in other combinations (níšta "nothing", íšta "anything").

18. Stevanović (1964, 316-7) and Brabec et al. (1958, 99) indicate that njégóv "his", njéenvnjeézín "her", njíh.ovvnjín "their" too show these shortened adjectival endings and are supported by Hodge and Janković (1965-9), who, though not discussing the inflection of these items, list forms with shortened adjectival endings. Maretić (1963, 194 and 204) and Rešetar (1922, 81) on the other hand admit (as alternates to the unrealistic normative -a, -u) the usual, unshortened adjective endings. Following the speech of my principal informant, I classify these items (njégóv etc. above) as regular adjectives with indefinite endings only in NA and unshortened adjectival endings in m.n.GDsg.
Stevanović (1964, 315) also indicates that many speakers treat moj-, tvoj-, svoj-, naš-, vaš-, kój-, and čij- as regular adjectives with unshortened endings in m.n.GDsg.

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